SANTOSH

Deemed to be University

3.7.1: Average number of Collaborative activities for research, faculty exchange, student exchange/ Industry-internship etc per year

S. No: 132

Title of the Collaborative activity: A prospective study to determine epidemiology, predisposing factors and microbiology of keratitis in north India

Name of the collaborator: Department of Microbiology, Super Speciality Paediatric Hospital & Postgraduate Teaching Institute, Noida, Uttar Pradesh, India

Name of the participants: Dakshina Bisht

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Advances in Medicine
Perween N et al. Int J Adv Med. 2020 Nov;7(11):1641-1646
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: https://dx.doi.org/10.18203/2349-3933.ijam20204513

Original Research Article

A prospective study to determine epidemiology, predisposing factors and microbiology of keratitis in north India

Naz Perween[1], Dakshina Bisht[2], Suprabha Chandran[3], Aroop Mohanty[4], Shyam K. Kumar[5]*

[1]Department of Microbiology, Super Speciality Paediatric Hospital & Postgraduate Teaching Institute, Noida, Uttar Pradesh, India
[2]Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India
[3]Ophthalmology, Resident, Darbhanga Medical College, Laheriasarai, Bihar, India
[4]Department of Microbiology, AIIMS Gorakhpur, Uttar Pradesh, India
[5]Department of Microbiology, SRL Labs, Deoghar, Jharkhand, India

Received: 30 September 2020
Revised: 19 October 2020
Accepted: 20 October 2020

***Correspondence:**
Dr. Shyam K. Kumar,
E-mail: dr.shyamkishor84@gmail.com

ABSTRACT

Background: Corneal opacification due to keratitis is a leading cause of blindness, with fungal pathogens being important causative agents. Thus, a prospective study was designed to identify the etiological agents; and assess the epidemiological features and risk factors for infective keratitis in India with particular reference to fungal keratitis.
Methods: Corneal scrapings were collected from 151 patients and subjected to direct microscopic examination by gram's stain, KOH wet mount, followed by fungal culture in sabouraud's dextrose agar and bacterial culture in MacConkey's agar and blood agar. Identification of fungal growth was done by colony morphology, slide culture and lacto phenol cotton blue wet mount preparation.
Results: Out of the 151 cases of keratitis, 65 (43.0%) showed fungal elements on KOH smear. By culture methods, microbial etiology (fungal/ bacterial) was established in 68 (45.0%) patients. *Aspergillus spp.* (57.7%) was the most frequently isolated fungus, followed by *Fusarium* (15.4%), *Penicillium* (7.7%), *Curvularia* (9.6%), *Alternaria* (5.8%) *and Candida albicans* (1.9%). History of trauma with vegetative and non-vegetative material and prior ophthalmologic intervention were the major identifiable risk factors.
Conclusions: Thus, *aspergillus spp*. is the most common cause for fungal keratitis in India, with *A. fumigatus* and *A. flavus* being the most familiar species, followed by Fusarium. Bacterial isolates were responsible for considerably fewer cases of keratitis.

Keywords: Fungi, Keratitis, India, Aspergillus

INTRODUCTION

Corneal opacification due to keratitis is a major cause of blindness and visual disability, in fact, second only to cataract in developing countries like Asia, Africa and the Middle East. A breach in common defense mechanism like lids, tear film and corneal epithelium leads to corneal invasion due to any microorganisms.[1] Fungal keratitis represents approximately 6% to 53% of all cases of culture-positive infectious keratitis.[2] Reports from different parts of the world suggest a paradigm shift, with an increasing incidence of fungal keratitis during the last four decades, possibly due to increased awareness and availability of fungal culture methods and identification. *Mycotic keratitis* is often associated with unfavorable outcomes due to the slower onset, long course and the diversity of clinical presentations, presenting the greatest challenge to the ophthalmologists.

S. No: 133

Title of the Collaborative activity: Antibacterial Potential of Neem (Azadirachta indica) against Uropathogens Producing Beta-Lactamase Enzymes: A Clue to Future Antibacterial Agent?

Name of the collaborator: Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Solan, Himachal Pradesh, India

Name of the participants: Sameer Singh Faujdar, Dakshina Bisht

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 133

ORIGINAL ARTICLE

Year : 2020 | Volume : 4 | Issue : 3 | Page : 232-238

Antibacterial potential of neem (*Azadirachta indica*) against uropathogens producing beta-lactamase enzymes: A clue to future antibacterial agent?

Sameer Singh Faujdar[1], Dakshina Bisht[1], Amisha Sharma[2]

[1] Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India

[2] Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Solan, Himachal Pradesh, India

Date of Submission	18-Mar-2020
Date of Acceptance	02-May-2020
Date of Web Publication	12-Sep-2020

Correspondence Address:
Prof. Dakshina Bisht
Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad - 201 009, Uttar Pradesh
India
Login to access the email ID

Source of Support: None, **Conflict of Interest:** None

crossref 6 Citations

DOI: 10.4103/bbrj.bbrj_38_20

Abstract

Background: Emergence of drug resistance in Gram-negative bacilli due to production of extended-spectrum beta-lactamases (ESBL), metallo-beta-lactamases (MBL), and AmpC beta-lactamase is very common nowadays; therefore, we are left with less choice for antibiotics

S. No: 134

Title of the Collaborative activity: Molecular Detection of Aspergillus in Sputum of Patients with Lower Respiratory Tract Infections

Name of the collaborator: Department of Microbiology, UCMS, GTBH, New Delhi, India

Name of the participants: 1.Alosha Sharma, 2.Dakshina Bisht, 3. V K Arora

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

Molecular Detection of *Aspergillus* in Sputum of Patients with Lower Respiratory Tract Infections

Alosha Sharma, Dakshina Bisht, Shukla Das[1], Gargi Rai[1], Shyama Dutt[1], V K Arora[2]

Departments of Microbiology and [2]TB and Chest, Santosh Medical College, Ghaziabad, Uttar Pradesh, [1]Department of Microbiology, UCMS, GTBH, New Delhi, India

Abstract

Background: Raised incidences of respiratory tract infections due to fungal agents in immunocompetent individuals are a cause of concern due to the unavailability of rapid diagnostic methods. **Materials and Methods:** Sputum and serum samples were collected from patients having lower respiratory tract infections (LRTIs), serum samples were screened for the presence of anti *Aspergillus* antibodies and sputum samples were homogenized and processed for identification of *Aspergillus* by conventional methods and further subjected to polymerase chain reaction (PCR) using genus-specific ITS 4-5 primers. **Results:** PCR identified *Aspergillus* in 28% sputum samples, which was high as compared to conventional methods. **Conclusion:** Simple conventional PCR technique proves to be useful screening in for early identification of *Aspergillus* colonization in patients with LRTI, which can prevent irreversible damage in their lungs by fungal invasion.

Keywords: *Aspergillus flavus, Aspergillus fumigatus, lower respiratory tract infections, polymerase chain reaction*

Introduction

Respiratory tract infections are globally responsible for one-third of the infectious diseases of which, fungal agents remain largely unrecognized. Most commonly *Aspergillus*, *Candida,* and *Mucorales* and rarely *Fusarium*, *Scedosporium*, *Penicillium*, and *Basidiomycetes* have been reported to be responsible for invasive fungal infections.[1] Among these *Aspergillus* spores due to its ubiquitous distribution gets suspended in air and sediment in distal airways and alveolar spaces.[2]

Respiratory samples such as sputum samples are easy to obtain and do not require any invasive procedure. Sputum of lower respiratory tract infected patients is routinely not sent for fungal culture. Furthermore, culture isolation for invasive infection has a variable sensitivity from 5% to 75% and poor specificity hence, repeated isolation is needed for diagnosing invasive aspergillosis.[3]

Detection of *Aspergillus* spp., implementing molecular methods have been documented in immunocompromised individuals, but not in immunocompetent individuals.[4] As there are rising incidences of invasive pulmonary aspergillosis (IPA) in immunocompetent individuals without traditional risk factors, rapid diagnostic tests such as polymerase chain reaction (PCR) are warranted along with other conventional methods, for early diagnosis of invasion by *Aspergillus* spp.[5]

Sensitivity and specificity of PCR in bronchoalveolar lavage fluid have been estimated to be 67%–100% and 55%–95%, respectively.[5] Few studies conducted in India emphasize on *Aspergillus* isolation from patients with complaints of lower respiratory tract infection (LRTI). Hence, the present study was undertaken to assess the ability of PCR for *Aspergillus* DNA detection in a sputum sample of patients suffering from LRTI and to evaluate the sensitivity and specificity of PCR comparing it to conventional culture methods.

Materials and Methods

The study was conducted in the Department of Microbiology and TB-Chest Clinic of Santosh Medical College and Hospital Ghaziabad in collaboration with the Department of Microbiology, University College of Medical Sciences, GTB Hospital, New Delhi.

How to cite this article: Sharma A, Bisht D, Das S, Rai G, Dutt S, Arora VK. Molecular detection of *Aspergillus* in sputum of patients with lower respiratory tract infections. Int J App Basic Med Res 2020;10:86-90.

Submitted: 02-Nov-2018
Revised: 30-Mar-2019
Accepted: 13-Feb-2020
Published Online: 02-Apr-2020

Address for correspondence:
Dr. Dakshina Bisht, Department of Microbiology, Santosh Medical College, Ghaziabad, Uttar Pradesh, India.
E-mail: dakshinabisht@gmail.com

Access this article online

Website: www.ijabmr.org

DOI: 10.4103/ijabmr.IJABMR_364_18

Quick Response Code:

S. No: 135

Title of the Collaborative activity: Hand hygiene compliance among healthcare workers in a tertiary care academic health care organization

Name of the collaborator: Department of Anaesthesia, Government Institute of Medical Sciences, Greater Noida, Uttar Pradesh, India

Name of the participants: 1.Varun Goel, 2.Dakshina Bisht, 3.Rashmi Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Research in Medical Sciences
Goel V et al. Int J Res Med Sci. 2020 Mar;8(3):xxx-xxx
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20200498

Original Research Article

Hand hygiene compliance among healthcare workers in a tertiary care academic health care organization

Varun Goel[1], Savita Gupta[2]*, Dakshina Bisht[1], Rashmi Sharma[3]

[1]Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India
[2]Department of Anaesthesia, Government Institute of Medical Sciences, Greater Noida, Uttar Pradesh, India
[3]Department of Anaesthesia, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India

Received: 08 January 2020
Accepted: 18 January 2020

***Correspondence:**
Dr. Savita Gupta,
E-mail: dr.gsavita@gmail.com

ABSTRACT

Background: Healthcare Associated Infections (HAIs) are a major cause of high morbidity, disability, mortality and rising costs for health systems. Preventing the HAI risk by planning and implementing effective preventive strategies is important to safeguard patient health. Handwashing is one of the fundamental measures for preventing transmission of hospital-acquired infections.
Methods: This cross-sectional observational study was conducted in the surgical ICU from January to February 2018 to evaluate the presence of adhesion to the different aspects of HH. Inclusion criteria included all nurses and allied healthcare workers of surgical ICU while all other HCWs were excluded. Two observers collected all HH data. During this analysis, 3000 HH opportunities were observed. HH compliance was tested for all 5 moments as per WHO guidelines. Data thus collected were entered into a computer-based spreadsheet for analysis using SPSS statistical software (version 20) (IBM Corp., NY, USA).
Results: Overall hand hygiene compliance observed as per WHO Guidelines was 79.8%. Nurses had an adherence rate of 77.8%; allied staff adherence was 81.8%. Nurses' compliance after touching patient surroundings was lowest at 60.7%. 96% staff was aware of the facts like diseases prevented by hand washing, ideal duration of HH, reduction of health care associated infections.
Conclusions: Overall, the involved ICUs showed low levels of adherence to best hygiene practices with overall compliance of 79.2%. This suggests the need to implement immediate strategies for infection control in the ICUs. A multidisciplinary intervention could be effective in preventing and control the HAI risk.

Keywords: Compliance, Hand hygiene, Hand hygiene compliance, 5 Moments

INTRODUCTION

Healthcare Associated Infections (HAIs) are caused by environmental pathogens or patient's endogenous flora.[1] Regular monitoring the five moments of hand hygiene by direct observation is a standard practice recommended by the World Health Organization (WHO) and constitutes a major preventive strategy of healthcare-associated infections.[2] Multiple studies suggests compliance with hand hygiene remains low among healthcare workers, ranging from 5% to 89%.[3,4] The WHO's recommended hand hygiene includes six unique steps with the primary objective of ensuring adequate coverage of all hand skin surfaces by cleaning products.

Hand Hygiene (HH) is among the most efficient methods of infection control programs, but compliance is generally poor. Hand hygiene improvement interventions must include control of compliance, which is mostly conducted by direct observation. Adherence to hand

S. No: 136

Title of the Collaborative activity: Antibacterial activity of Syzygium aromaticum (clove) against uropathogens producing ESBL, MBL, and AmpC beta-lactamase: Are we close to getting a new antibacterial agent?

Name of the collaborator: Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Kumarhatti, Solan, Himachal Pradesh, India

Name of the participants: 1.Sameer S. Faujdar, 2.Dakshina Bisht

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

Antibacterial activity of *Syzygium aromaticum* (clove) against uropathogens producing ESBL, MBL, and AmpC beta-lactamase: Are we close to getting a new antibacterial agent?

Sameer S. Faujdar[1], Dakshina Bisht[1], Amisha Sharma[2]

[1]*Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh,* [2]*Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Kumarhatti, Solan, Himachal Pradesh, India*

Abstract

Introduction: The present study was done to access the antibacterial activity of clove (*Syzygium aromaticum*) against extended-spectrum beta-lactamase (ESBL), metallo-beta-lactamase (MBL), and AmpC beta-lactamase-producing gram-negative bacteria causing urinary tract infection. **Methods:** A total of 221 gram-negative uropathogens were isolated and screened for beta-lactamase (ESBL, MBL, and AmpC) production and further tested against ethanolic extract of clove (*S. aromaticum*) for its antibacterial activity. **Results:** Clove was effective against all gram-negative isolates but the best antibacterial activity was shown against *Proteus* species with 19 mm zone of inhibition, 0.39 mg/ml minimum inhibitory concentration (MIC) and 0.19 mg/ml minimum bactericidal concentration (MBC).**Conclusions:** Clove extract showed different antibacterial potential against all gram-negative uropathogens. Clove activity for particular strain was found to be similar between isolates producing beta-lactamase and non beta-lactamase.

Keywords: Extended-spectrum β-lactamases, metallo-beta-lactamase, and AmpC beta-lactamase, *Syzygium aromaticum* (clove), urinary tract infection, uropathogens

Introduction

There are many infectious diseases that occur during a lifetime. One of these is urinary tract infection (UTI), which is experienced by approximately 10% of population and in some cases can lead to morbidity in patients if not treated on time. UTI is caused by many different microorganisms (uropathogens) which include viruses, fungi, and bacteria but the major microorganism responsible for causing UTI in 95% cases is the bacteria.[1,2] Antibiotic resistance against these bacteria causing UTI has been reported by many authors from developed and developing countries. This rapid spread of resistance especially toward beta-lactam antibiotics is a global threat as it possesses a therapeutic challenge which is mediated by different beta-lactamases enzymes such as extended-spectrum beta-lactamase (ESBL), metallo-beta-lactamases (MBLs), and AmpC beta-lactamase. Therefore, it has led to limited choice of antibiotics due to the continuous emergence of these enzymes. Hence, it has become utmost important to find out new antibacterial agents.[3,4] Due to the emergence

Address for correspondence: Dr. Dakshina Bisht, Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh - 201 009, India.
E-mail: dakshinabisht@gmail.com

Received: 18-10-2019 **Revised:** 06-12-2019
Accepted: 16-12-2019 **Published:** 28-01-2020

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_908_19

How to cite this article: Faujdar SS, Bisht D, Sharma A. Antibacterial activity of *Syzygium aromaticum* (clove) against uropathogens producing ESBL, MBL, and AmpC beta-lactamase: Are we close to getting a new antibacterial agent? J Family Med Prim Care 2020;9:180-6.

S. No: 137

Title of the Collaborative activity: Use of Gel Card Micro typing For Blood Compatibility Analysis and Its Comparison with Conventional Tube Technique

Name of the collaborator: Department of Pathology, G.S. Medical College, Hapur, Uttar Pradesh, India, Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, Uttar Pradesh, India

Name of the participants: Dr Mayurika S Tyagi, Dr Swati Singh

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL RESEARCH PAPER

Volume - 9 | Issue - 6 | June - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

USE OF GEL CARD MICROTYPING FOR BLOOD COMPATIBILITY ANALYSIS AND ITS COMPARISON WITH CONVENTIONAL TUBE TECHNIQUE

Pathology

Dr Priyanka Gulati Tutor, Department of Pathology, G.S. Medical College, Hapur, Uttar Pradesh, India.

Dr Mayurika S Tyagi* Assistant Professor, Department of Pathology, Santosh Medical College, Ghaziabad, Uttar Pradesh, India. *Corresponding Author

Brig (Dr) PS Dhot Professor, Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, Uttar Pradesh, India.

Dr Swati Singh Assistant Professor, Department of Pathology, Santosh Medical College, Ghaziabad, Uttar Pradesh, India.

ABSTRACT

Traditionally conventional spin tube technique (CTT) had been used for cross-matching and compatibility testing of blood products in the blood bank. A study was conducted in a blood bank associated with a teaching hospital in National Capital Region of Delhi from May 2015 to November 2016, for comparing the efficacy of gel card micro typing system and CTT, when used for cross-matching. The sensitivity, specificity, turnaround time for conducting the test and cost-effectiveness of both the techniques were analysed.

A total of 1295 blood units were issued after cross-matching with the recipient's sample. Both CTT and gel card technique were used for cross-matching. Gel card technique was found to be more sensitive and specific for the test. The conventional method using saline was unable to detect minor antibodies present in the blood; however, when an indirect antiglobulin test was applied (Coombs Crossmatch), the results were comparable. The gel card technique is a rapid, reliable and more accurate test for cross-matching in comparison to conventional spin tube method.

KEYWORDS

Compatibility analysis, conventional spin tube technique, gel card technique, cross-match, coombs cross-match.

INTRODUCTION

Pretransfusion compatibility testing (cross-matching) of donor and recipient blood is essential to prevent Immune-mediated Hemolytic Transfusion Reaction. Traditionally in all the blood banks Conventional spin tube technique and IAT (Coomb's Crossmatch) has been used for cross-matching before issuing the blood unit to the recipient. The newer technique of Gel card method for cross-matching and compatibility testing was introduced by Lapierre et al. in 1988 and is widely used these days.

A study was conducted in the blood bank associated with teaching hospital in NCR Delhi from May 2015 to November 2016, for comparison between CTT and Gel Card method (newly introduced in the department), when used for cross-matching.

AIM

The study aimed at comparing the affirmation of results obtained from both Conventional Spin Tube Technique and Gel Card Method. The sensitivity, specificity, turnaround time, and required funds were analysed.

MATERIALS AND METHODS

The Blood Bank issued 1295 units of blood from May 2015 to November 2016. Each unit was tested for compatibility with the recipient by doing both major and minor cross-match. The tests were performed using both ID gel card technique and Conventional Spin tube method (Saline and IAT).

For the testing with Gel card technique, we used Low Ionic Salt Solution (LISS), Coombs ID cards incorporated with AHG, Sodium azide, Specific reagent AHG, ID centrifuge, ID diluent, donor red cell suspension and patients serum.

The donor red cell suspension was prepared at a concentration of 0.8%, by mixing ten microliters of red cells in 1 millilitre of low ionic salt solution.

Each ID gel card contains six microtubes with approximately 35 microlitres of Sephadex gel which is incorporated in a buffer solution, along with the preservative agent.

According to the instructions mentioned on the professional test kit of ID gel card technology, 50 microlitres of suspension of donor red cells was pipetted out into a microtube, and to this, 25 microlitres of patients serum were added. After incubation at 37-degree centigrade for 15 minutes, the cards were subjected to centrifugation at 1000 rpm for 10 minutes and after that reading was noted.

No agglutination (or appearance of a dark red well-formed pallet of RBCs on the bottom of microtube with no aggregates in gel matrix) indicates a negative test result, and the donor's blood is compatible with recipients blood, and thus blood can be transfused safely. Presence of agglutination (which can be graded from 1+ to 4+) indicates incompatibility. (Figure 1)

Then the samples were tested for compatibility using major IAT cross-match with polyspecific antiglobulin reagent by CTT according to the standard method. One drop of 3-5% suspension of donor red cells was mixed with two drops of patient serum and was incubated for 60 minutes at 37 degree Celsius, washed three times with normal saline, and one drop of antiglobulin reagent was added followed by centrifugation at 1000 rpm for 1 minute. The results were interpreted as compatible or incompatible. The strengths of positive reactions were also noted. These all were incompatible for blood transfusion.

The results of cross matches by an automated system and CTT were compared. The samples which did not show the same results were subjected to antibody screening and identification by manual conventional antiglobulin test.

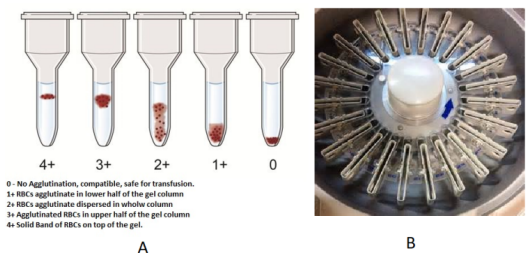

Figure 1. ID Gel card system- A) Grading of agglutination in gel cards B) Gel card centrifuge

RESULTS

In the current study, the number of blood units issued were all tested for compatibility using conventional spin tube method first. The blood bags chosen were of the same blood group as the recipient. In the conventional tube method, 100% of them showed compatibility. Moreover, when these samples were tested using the gel card technique, 07 samples (0.5%) showed a mismatch. However, when the

S. No: 138

Title of the Collaborative activity: A Study of Platelet Rich Plasma Therapy in Osteoarthritis in a Tertiary Care Hospital in North India

Name of the collaborator: Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, UP, India, Data Science and Artificial Intelligence, IBM, Toronto, Canada

Name of the participants: Mayurika Tyagi

Year of collaboration: 2019-20

Nature of the activity: Research

A Study of Platelet Rich Plasma Therapy in Osteoarthritis in a Tertiary Care Hospital in North India

Paramjit Singh Dhot[1], Ashok Kumar[2], Tarundeep Dhot[3], Mayurika Tyagi[4], Trupti Barot[5], Amita[6]

ABSTRACT

Introduction: Platelet-rich plasma (PRP) platelet concentration is more than that in peripheral blood. Presently, review of literature favours PRP use over other intra-articular treatments to improve pain scales in the short and medium term (6–12 months). This was a preliminary study using PRP as an intra-articular treatment for knee osteoarthritis, compared with an intra-articular control (hyaluronic acid), in early osteoarthritis.

Material and methods: One fifty patients of early osteoarthritis were included in the study along with controls PRP was administered intraarticularly to these patients at 3, 6 and 12-weeks intervals hyaluronic acid was administered to 150 controls.

Results: Improvement in symptoms of pain was seen in 95% patients. Remaining five percent patients were lost to follow up.

Conclusion: The present study shows an improvement in 95% of patients which compares well with other studies.

Keywords: Anti-Inflammatory Intra-Articular Therapies, Clinical Evidence, Knee Osteoarthritis, Platelet-Rich Plasma

INTRODUCTION

Platelets are small, anucleate fragments with occasional reddish granules, 2 micrometers in diameter, 8 fl volume with variable size and shape. Reticulated platelets are young platelets with their RNA content, recently released from the bone marrow. The platelet membrane consists of a phospholipid bilayer with glycoproteins and lipids. The platelet membranous systems consist of surface connected canalicular system and dense tubules. The membrane cytoskeleton consists of membrane skeleton and microtubules. Platelets possess secretory granules and mechanism for their release.[1] It includes alpha and dense granules, lysosomes and peroxisomes. Alpha granules and dense bodies are the main secretory granules that release cargo (for example fibrinogen and ADB) upon platelet activation. Platelet alpha granules have beta thromboglobulin, platelet factor 4, thrombospondin and have a role in angiogenesis. The lifespan is 8 to 12 days. Three factors (Factor 5, fibrinogen, and vWF) are found in platelets and granules contribute significantly to coagulation. Platelet fibrinogen contributes up to 10% of platelet protein.

Approximately, 800 proteins and molecules, comprising cytokines, chemokines, membrane proteins, metabolites, messenger molecules are found in platelets. Platelets are involved in various immune response, angiogenesis, and tissue regeneration.[3–5] This study was planned using PRP as an intra-articular treatment for knee osteoarthritis, compared with an intra-articular control (hyaluronic acid), in early osteoarthritis.

MATERIAL AND METHODS

A total 150 patients reported to the Orthopaedic outpatient department of a tertiary care hospital in North India. Patients who complained of pain in the knee were selected for the study.

They were graded as follows:

- **Grade 1:** Stiffness of knee relieved by hot fomentation and rest. Radiological evidence Nil.
- **Grade 2:** Stiffness with pain increased by activity like squatting and climbing stairs relieved by rest and analgesics. Radiological evidence showing mild affusion and increase in patelo femoral distance. Mild may or may not be osteophyte formation. They were given PRP intra-articularly at 3, 6, 12 weeks interval. Patients showed 95% benefit in their symptoms. 3-5% patients did not report for follow-up (figure-1).

Whitman in 1997[6] first described the use of platelet concentrate although blood-derived fibrin glues were used to plug wounds and assist in healing of wounds.[7] Platelet concentrates was called platelet-rich plasma (PRP), in 1998.[8]

Preparation Methods (figure-2,3)

PRGF-System® (BTI Biotechnology Institute, Vitoria, Spain): At least 1 million platelets per microliter are available in PRP. It must have a platelet concentration of

[1]Professor, department of Pathology, Saraswati Institute of Medical Sciences, Hapur, UP, India, [2]HOD & Professor, Department of Orthopedics, Saraswati Institute of Medical Sciences, Hapur, UP, India, [3]Associate Partner, Data Science and Artificial Intelligence, IBM, Toronto, Canada, [4]Asst Professor, Department of Pathology, Santosh Medical College, Ghaziabad, UP, India, [5]Consultant. Department of Transfusion Medicine, Prathama Blood Bank, Ahmedabad, Gujarat, India, [6]Immunisation Officer, Immunisation Department, Health and Family Welfare, NCT, Delhi, India

Corresponding author: Dr Paramjit Singh Dhot, Professor, Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, UP, India

How to cite this article: Paramjit Singh Dhot, Ashok Kumar, Tarundeep Dhot, Mayurika Tyagi, Trupti Barot, Amita. A study of platelet rich plasma therapy in osteoarthritis in a tertiary care hospital in North India. International Journal of Contemporary Medical Research 2020;7(8):H5-H9.

DOI: http://dx.doi.org/10.21276/ijcmr.2020.7.8.7

S. No: 139

Title of the Collaborative activity: Determination of nitrofurantoin and fosfomycin susceptibility among urinary Escherichia coli isolates

Name of the collaborator: Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India, Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India

Name of the participants: Malay Bajpai

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Research in Medical Sciences
Kanaujia R et al. Int J Res Med Sci. 2020 Sep;8(9):3274-3276
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20203676

Original Research Article

Determination of nitrofurantoin and fosfomycin susceptibility among urinary *Escherichia coli* isolates

Rachana Kanaujia[1], Amit Kumar[2]*, Malay Bajpai[3]

[1]Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India
[2]Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India
[3]Department of Pathology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India

Received: 07 July 2020
Accepted: 31 July 2020

***Correspondence:**
Dr. Amit Kumar,
E-mail: dramitgupta87@gmail.com

ABSTRACT

Background: Urinary tract infections (UTIs) are one of the most common infections. For treatment of UTIs, there are limited antibiotics due to increased resistance among uropathogens. Two older antibiotics; Nitrofurantoin and Fosfomycin have become novel oral therapeutic options against uropathogens. Aim of the study was to identify UTI causing micro-organisms and evaluate in-vitro activity of nitrofurantoin and fosfomycin against most common isolated organism (*E. coli*).
Methods: Results of urine samples culture and susceptibility testing over a period of 1 year were analysed and included in this study.
Results: Micro-organisms were isolated from 568 urine samples. Most commonly isolated organism was *Escherichia coli* (40.50%), followed by *Klebsiella* spp. (20.07%) and *Staphylococcus spp.* (17.07%). Susceptibility of *E. coli* to nitrofurantoin and fosfomycin was 91.74% and 65.65% respectively.
Conclusion: Good activity of nitrofurantoin and fosfomycin against *E. coli* indicates that these two drugs are potential therapeutic alternatives for urinary tract infections.

Keywords: Urinary tract infections, *E. coli*, Nitrofurantoin, Fosfomycin

INTRODUCTION

Urinary tract infections (UTI) are one of the most common infections, affecting people from all population and age groups. It accounts for 25% of all infections.[1] Every year approximately 150 million people are diagnosed with urinary tract infection worldwide.[2]

Usually UTI is managed empirically, leading to antimicrobial agents misuse, development of multi-drug resistance among urinary pathogens and failure of empirical therapy. Empirical antimicrobial agent selection may be determined on the basis of most likely urinary pathogen and its expected susceptibility pattern. Distribution of urinary pathogen and susceptibility to antibiotics varies in different geographic area and time to time. So periodic monitoring of UTI causing organisms and their susceptibility pattern is necessary for effective empirical treatment and management of patients with urinary tract infection.[3–5]

Due to lack of effective therapeutic alternatives to treat multi-drug-resistant infections, old antibiotics like nitrofurantoin, fosfomycin, have become important. Nitrofurantoin, fosfomycin are oral antibiotics and attain high concentrations in the urinary tract with minimal systemic effect.[6,7]

Objective of this study was to determine UTI causing pathogens in patients at a tertiary care center and in vitro

S. No: 140

Title of the Collaborative activity: Estimation of prevalence of dengue viral infection among clinically suspected patients attending a tertiary care centre in Uttar Pradesh, India

Name of the collaborator: Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India, Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India

Name of the participants: Malay Bajpai

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Advances in Medicine
Kumar A et al. Int J Adv Med. 2020 Sep;7(9):1414-1417
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: http://dx.doi.org/10.18203/2349-3933.ijam20203607

Original Research Article

Estimation of prevalence of dengue viral infection among clinically suspected patients attending a tertiary care centre in Uttar Pradesh, India

Amit Kumar[1], Rachana Kanaujia[2]*, Malay Bajpai[3]

[1]Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India
[2]Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India
[3]Department of Pathology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India

Received: 12 July 2020
Accepted: 04 August 2020

***Correspondence:**
Dr. Rachana Kanaujia,
E-mail: rachanakanaujia@yahoo.com

ABSTRACT

Background: Dengue virus infection is fastest spreading, mosquito borne viral disease in the world with an estimated 3.9 billion people at risk of infection. Dengue is notifiable disease in India, but real number of cases could not be identified many times due to the under-reporting or misdiagnosis of cases. The purpose of the present study was to estimate prevalence of dengue viral Infection among suspected patients attending a tertiary care centre.
Methods: Blood samples from suspected patients were collected over a period of 1 year and were analysed for dengue virus specific IgM antibodies and NS1 antigen by immuno-chromatographic method.
Results: Total 196 samples were tested out of which 43 (21.43%) showed laboratory evidence of dengue. Maximum samples were received during monsoon and post-monsoon period. Dengue sero-positivity was found to be highest in post monsoon period i.e., October-November. Maximum dengue positivity rate was found in the age group of 16-45 years.
Conclusions: For estimation of true burden of dengue in India and its geographical mapping to control further disease transmission; laboratory-based active surveillance systems are required along with passive surveillance and control programs.

Keywords: Dengue virus infections, Immunoglobulin M antibodies, Mosquito borne diseases, Non-structural protein antigen

INTRODUCTION

Dengue virus infection is fastest spreading, mosquito borne viral disease in the world with an estimated 3.9 billion people at risk of infection.[1,2]

It is caused by dengue virus (DEN- 1 to DEN-4 serotypes) belonging to the family Flaviviridae, may present with wide variety of clinical illnesses ranging from mildly symptomatic dengue fever (DF) to more life-threatening dengue shock syndrome (DSS) and dengue hemorrhagic fever (DHF).[3,4]

Dengue is endemic in almost all states of India, with variations in risk influenced by rain fall, temperature, transport; rapid and unplanned urbanization.[5-7]

Dengue is notifiable disease in India, but real number of cases could not be identified many times due to the under-reporting or misdiagnosis of cases.[8-10]

The purpose of the present study is to estimate prevalence of dengue viral infection among suspected patients attending a tertiary care centre from January to December 2019.

S. No: 141

Title of the Collaborative activity: Distribution and Occurrence of Abo and Rhesus Blood Groups in Blood Donors of Ghaziabad: A Hospital Based Study

Name of the collaborator: Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, Uttar Pradesh, India.

Name of the participants: Dr Mayurika S Tyagi, Dr Swati Singh, Dr Malay Bajpai

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL RESEARCH PAPER

Volume - 9 | Issue - 9 | September - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

DISTRIBUTION AND OCCURRENCE OF ABO AND RHESUS BLOOD GROUPS IN BLOOD DONORS OF GHAZIABAD: A HOSPITAL BASED STUDY

Pathology

Dr Mayurika S Tyagi — Assistant Professor, Department of Pathology, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, India.

Dr Swati Singh* — Professor and Head, Department of Pathology, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, India. *Corresponding Author

Dr Malay Bajpai — Professor and Head, Department of Pathology, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, India.

Dr (Brig) P S Dhot — Professor, Department of Pathology, Saraswati Institute of Medical Sciences, Hapur, Uttar Pradesh, India.

ABSTRACT

Introduction: Geographical distribution of ABO and Rhesus (Rh) antigens is important for blood transfusion services and population genetics studies. More than 400 red cells antigen have been identified, but the antigens determining ABO and Rh blood group systems are the most important in Transfusion Medicine.

Objective: This study was conducted with an objective to study the distribution of ABO and Rh blood groups among blood donors in a teaching hospital in Ghaziabad, Uttar Pradesh, India which is essential for effective management of blood inventory.

Material and Methods: It is a retrospective study conducted at the Blood Bank, Santosh Medical and Dental College Hospitals. The data was collected from 01/01/2016 TO 31/07/2020. Total 7078 blood donors were considered medically fit and accepted for blood donation. ABO and Rh typing was done by both forward and reverse grouping technique with tube agglutination method using commercially available standard monoclonal antisera and freshly prepared pooled cells.

Result: Out of 7078 blood donors, B blood group was most common (2561-36.2%), and the least blood group was AB Blood group (803 – 11.3%). There were more Rh-positive blood donors (6551 – 92.6%) as compared to Rh-Negative blood donors (527 – 7.4%).
Out of 7078 blood donors, 6766 (95.6%) were male and 312 (4.4%) were female donors.

Conclusion: The most common blood group among voluntary donors was B positive and least common blood group was AB negative. The study has a considerable implication with respect to the inventory management of blood bank and transfusion services for the patients admitted in our teaching hospital.

KEYWORDS

ABO, Rhesus (Rh), Blood Group, Blood Donors, Ghaziabad.

INTRODUCTION

Human blood groups are genetically inherited and exhibit varying degree of polymorphism. There is a significant difference in the frequency of distribution of the various blood groups in the population. Of the various blood group systems, the ABO blood group system is the most important blood group system in health and disease.[1]

To date about 400 red cell antigens have been recognized by International Society of Blood Transfusion.[2] These antigens are organized into 36 human blood group systems, and each person has a unique spectrum of blood groups with the exception of identical twins or triplets whose blood groups are exactly the same.[3,4] The most important human blood group systems for blood transfusion or transplantation are the ABO and Rhesus blood systems. Red blood cells contain a series of glycoproteins and glycolipids on their surface, which constitutes the blood group antigens.

Karl Landsteiner, a scientist from Vienna, discovered the ABO blood group system in the year 1901.[1] He identified three blood group types A, B and O. Alfred Von Decastello and Adrian Sturli discovered the fourth blood group AB, in 1902.[5] Genes encoding the ABO system are located on the long arm of chromosome 9q and determine the presence or absence of A and B surface antigens. Antibodies of ABO system (Anti A and Anti B) are naturally occurring and are found in the serum of individuals missing the corresponding antigen.

The Rh blood group system was found in 1941.[1] Rh phenotype is classified as Rh – D positive and Rh – D negative depending on whether Rh antigen is present on red cells or not. The Rh - D antigens have greater immunogenicity than all other red cell antigens except A and B antigens. Incompatible blood transfusion can be associated with acute intravascular hemolysis, renal failure and death. It may cause of haemolytic disease of the newborn (HDN) and hence crucial in Obstetrics. Of all the Rhesus antigens, D antigen is most immunogenic. On exposure to the D antigen via pregnancy, transfusion or transplantation, individuals with initially absent D antigen, produce Anti D. So in the blood bank, every blood donation is screened for ABO and Rhesus factor.

Despite the fact that all individuals share the same blood group system, they differ in the distribution and frequencies of a specific type.[7] ABO and Rhesus (Rh) groups vary markedly in different parts of the world. The distribution and occurrence of ABO and Rh blood groups is vital for the effective management of blood banks.[6] This study was conducted with the aim to determine the distribution of ABO and Rhesus blood groups among blood donors.

MATERIAL AND METHOD

It is a retrospective study conducted at the Blood Bank, Santosh Medical and Dental College Hospitals. The data was collected from 01/01/2016 TO 31/07/2020. This data included both voluntary and replacement donors who have donated blood in the blood bank or the voluntary blood donation camps conducted by the department. The donors were first registered and screened by filling up a registration form carrying all the information like personal details, demographic details, occupation and medical history. The medical officer then screened the donors according to blood donor selection criteria and guidelines from drug and cosmetic act and NACO. Individuals with good health, physically fit and mentally alert were selected for blood donation as donors. The donors were then requested to sign the donor questionnaire and inform consent form.

Total 7078 blood donors were considered medically fit and accepted for blood donation. After blood donation, ABO and Rh typing was done by both forward and reverse grouping technique with conventional tube agglutination method from pilot samples of the donors following standard operating procedures of the blood bank. The forward grouping was performed using commercially available standard monoclonal antisera Anti A, Anti B, Anti AB and Anti H (Tulip diagnostics ltd) and reverse grouping was performed using freshly prepared pooled cells (A cells, B cells, O cells). For Rh typing anti D antisera (Tulip diagnostics) of two different lots was used.

S. No: 142

Title of the Collaborative activity: Effect of Cigarette Smoking on Selected Antioxidant Enzymes and Oxidative Stress Biomarkers

Name of the collaborator: Department of Biochemistry, Government Medical College, Haldwani, Uttarakhand, India.

Name of the participants: 1.Basant Joshi, 2.Preeti Sharma, 3.Tapan Mohapatra, 4.Pradeep Kumar

Year of collaboration: 2019-20

Nature of the activity: Research

DOI: 10.7860/JCDR/2020/45948.14138

Original Article

Biochemistry Section

Effect of Cigarette Smoking on Selected Antioxidant Enzymes and Oxidative Stress Biomarkers

BASANT JOSHI[1], SANGEETA SINGH[2], PREETI SHARMA[3], TAPAN MOHAPATRA[4], PRADEEP KUMAR[5]

ABSTRACT

Introduction: Cigarette Smoking (CS) is the single greatest preventable cause of disease and death and is rich in Reactive Oxygen and Nitrogen Species (ROS and RNS). These can cause the production of other free radicals, which, in turn, initiate lipid peroxidation and cause several diseases. Free radical scavenger enzymes namely Superoxide Dismutase (SOD), Catalase (CAT) and Glutathione Peroxidase (GPx) represent the enzymatic part that have the ability to inhibit oxidative stress by scavenging the highly destructive free radicals.

Aim: To study the effect of CS on selected antioxidant enzymes and oxidative stress biomarkers.

Materials and Methods: A case control study was conducted from September 2016 to September 2019 in which total of 284 healthy (without any systemic diseases) cigarette smokers (cases) in the age group of 18-60 years compared with age and sex matched 284 nonsmokers (controls) were included in the study. Estimation of serum 8-hydroxydeoxyguanosine (8-OHdG) by Enzyme Linked Immunosorbant Assay (ELISA), Malondialdehyde (MDA) by Thiobarbuturic Acid Reactive Substances (TBARS), SOD by water soluble tetrazolium salt 1, GPx and CAT by colorimetric method. The analysis was carried out using the SPSS 19.0.2 program for windows. Unpaired t-test and one-way ANOVA were used to analyse all the data for statistical significance.

Results: The mean Serum MDA and 8-OHdG levels were significantly raised 7.47±1.84, 63.41±22.44 as compared to nonsmokers (3.90±1.03, 40.04±20.14) and serum SOD, Gpx and CAT levels were decreased 62.55±19.97, 44.45±16.60 and 12.92±10.16 in cigarette smokers as compared to nonsmokers 274.04±68.37, 208.56±75.63 and 127.82±18.68, respectively. These differences were also found to be statistically significant in cigarette smokers according to duration and number of cigarette smoked at the level of <0.05.

Conclusion: Cigarette Smoking, especially long-term smoking may leads to significant changes in the enzymatic antioxidant defense systems of smokers. Discontinuation of smoking and general awareness needs to be created to minimise the risk of smoking related diseases.

Keywords: Catalase, Cigarette smokers, Glutathione peroxidase, Serum oxidase dismutase

INTRODUCTION

The Cigarette Smoking (CS) is the inhalation of smoke from burned dried leaves of the tobacco plant, mainly in the form of cigarette [1]. Smoking should be considered a pandemic due to citing the death of five million individuals worldwide every year by smoking-related diseases and death [2].

Cigarette smoke is a mixture of more than 4000 different chemicals constituents. Nicotine (3-{1-Methyl-2- pyrrolidinyl} pyridine, is one important alkaloid contained in tobacco leaves. The nicotine is extracted from the dried leaves of the tobacco plant (*Nicotinia tabaum* and *N. rustica*). Nicotine is primarily metabolised by the liver, lungs and kidney and half-life of two hours [3]. Cigarette smoke is rich in ROS and RNS, such as nitrogen, alkoxyl and peroxylradicals. These can cause the production of other free radicals, which, in turn, initiate lipid peroxidation on the Low Density Lipoprotein (LDL) particle and cause endothelial cell dysfunction. Smoking may enhance oxidative stress through generation of ROS, thereby causing lipid peroxidation. MDA is an organic compound with the formula $CH_2(CHO)_2$ and is used as a biomarker to measure the level of oxidative stress by a variety of chemical tests and the most frequently used Thiobarbituric (TBA) reaction [4].

ROS generated by compounds containing cigarette smoke, which can directly or indirectly damage DNA, increasing inflammation, thus promoting carcinogenesis in cigarette smokers. In epidemiological studies the Oxidised Guanine/guanosine (OxGua) molecule, 8-hydroxydeoxyguanine (8-OHdG) has been used as biomarkers to assess the intensity of ROS-induced DNA damage [5].

Smoking disturbed the antioxidant enzyme balance. Antioxidant enzymes deactivate free radicals before they attacks cellular components. Antioxidant enzymes act by decreasing the energy of the free radicals or by giving up some of their electrons for its use, thereby causing it to become stable [4].

SOD is metallo-enzyme and is considered the first line of defense because it firstly catalyses in the system harvesting oxygen-free radicals, therefore SOD prevents the oxidation of biological molecules [6]. GPx is a *tetra* metric enzyme having four 22 KDa monomers, a selenocysteine moiety is also present in the active site of this enzyme. Four subspecies of GPx catalyzes the reduction of hydrogen peroxide and organic hydro peroxides ROOH to water [7]. CAT, a *tetra* metric enzyme and acts catalytically remove hydrogen peroxides (H2O2) by forming water and oxygen. It is mainly present in the Peroxisomes of mammalian cells [8].

SOD, CAT and GPx are the free radical scavenger enzymes have the ability to inhibit oxidative stress by scavenging the highly destructive free radicals. MDA has a potentially important contribution to DNA damage and mutation, and it has been shown to be mutagenic in bacterial and mammalian cell assays, and it is carcinogenic also. If there is an excessive production of free radicals from exogenous sources added to the endogenous production, the available tissue defense system becomes sluggish resulting in oxidative damage to the tissues and leads to large number of human diseases including ischemic heart disease, cancer, diabetes mellitus, respiratory diseases and ageing [8]. Therefore, the present study was undertaken to assess the extent of lipid peroxidation (also with new marker 8-OHdG) and the status of antioxidants enzymes in cigarette smokers.

S. No: 143

Title of the Collaborative activity: Prime Risk Factors to Act as Biomarkers for the Diagnosis of Myocardial Infarction

Name of the collaborator: Department of Biochemistry, G.S.V.M. Medical College Kanpur, India

Department of Microbiology, Mahatma Gandhi Memorial Medical College, Indore, India.

Name of the participants: 1.Manish Kr Verma, 2.Pradeep Kumar, 3.Preeti Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 143

Journal of Pharmaceutical Research International

33(24B): 1-12, 2021; Article no.JPRI.67562
ISSN: 2456-9119
(Past name: British Journal of Pharmaceutical Research, Past ISSN: 2231-2919, NLM ID: 101631759)

Prime Risk Factors to Act as Biomarkers for the Diagnosis of Myocardial Infarction

Manish Kr Verma[1], Pradeep Kumar[1], Anand Narayan Singh[2], Preeti Sharma[1*] Suman Kumar[3], Desh Deepak Singh[4], Poonam Verma[5] and Rachna Sharma[6]

[1]Department of Biochemistry, Santosh Medical College and Hospital (Santosh University), Ghaziabad, India.
[2]Department of Biochemistry, G.S.V.M. Medical College Kanpur, India.
[3]Department of Microbiology, Mahatma Gandhi Memorial Medical College, Indore, India.
[4]Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur, India.
[5]Department of Biotechnology, IFTM University, Moradabad, UP, India.
[6]T.S. Misra Medical College & Hospital Lucknow, India.

Authors' contributions

This work was carried out in collaboration among all authors. Authors PK, PS and ANS wrote the research concept. Authors PK, PS, ANS and MKV designed the study. Authors PK, PS and ANS supervised of the work. Author MKV collect the materials and data. Authors MKV, DDS and SK performed data analysis and Interpretation. Authors MKV, PV and RS managed the literature searches. Authors PS, DDS and PV wrote the article, critical review and article editing.

Article Information

DOI: 10.9734/JPRI/2021/v33i24B31435
Editor(s):
(1) Dr. Mohamed Fathy, Assiut University, Egypt.
Reviewers:
(1) Nantarat Komanasin, Khon Kaen University, Thailand.
(2) Serdar OLT, Adıyaman University, Turkey.
Complete Peer review History: http://www.sdiarticle4.com/review-history/67562

Original Research Article

Received 05 February 2021
Accepted 10 April 2021
Published 17 April 2021

ABSTRACT

Aims: This study was done to find out retrospective case-control with respect to myocardial infarction diagnosis on the basis of biochemical markers and lipid profile characteristics.
Design and Setting: This study was conducted at the Department of Biochemistry and sample collection at LPS Institute of Cardiology & Cardiac Surgery Department, Kanpur.
Methods: The total number of subjects participated in this study (n=178), of either sex (with age>65years) were included in this study from the case collected from Outpatient Department (OPD) and Indoor Patient Department (IPD) and control from patients attendant, which consisted of two subject groups: The group I: myocardial infarction (cases) n= 89 and Group II: Healthy Subjects

**Corresponding author: E-mail: prcdri2003@yahoo.co.in;*

S. No: 144

Title of the Collaborative activity: A study to assess the predictive value of CRP in detecting type-II diabetes mellitus with nephropathy

Name of the collaborator: Department of Biochemistry, Government Medical College, Saharanpur, Uttar Pradesh, India

Name of the participants: 1.Shashi Prabha Singh, 2.Pradeep Kumar, 3.Preeti Sharma, 4.Manish Verma

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation Journal Home Page: www.pharmascope.org/ijrps

A study to assess the predictive value of CRP in detecting type-II diabetes mellitus with nephropathy

Shashi Prabha Singh[1], Pradeep Kumar[1], Preeti Sharma[*1], Rakesh Sharma[2], Manish Verma[1]

[1]Department of Biochemistry, Santosh Medical College and Hospital, Santosh deemed to be University, Ghaziabad, Uttar Pradesh, Delhi-NCR, India

[2]Department of Biochemistry, Government Medical College, Saharanpur, Uttar Pradesh, India

Article History:

Received on: 05 Nov 2020
Revised on: 05 Dec 2020
Accepted on: 08 Dec 2020

Keywords:

Diabetes type 2,
Nephropathy,
C reactive protein

ABSTRACT

To assess C reactive protein (CRP) in detecting type-II diabetes mellitus with nephropathy. Patients with a history of diabetes type 2 with nephropathy and patients with diabetes type 2 without nephropathy were included in the study. A total of 30 cases, both male and female, were recruited and compared with30 normal healthy adults. Each participant (age, gender, BMI, i.e. body mass index and WHR, i.e. waist-hip ratio) were recorded. CRP was measured by immunoturbidimetric method. Total cholesterol, triglycerides, and high-density lipoprotein (HDL) cholesterol were measured by the CHOD-POD method, GPO-PAP method, and CHOD-POD/phosphotungstic method. Low-density lipoprotein (LDL)cholesterol and very low-density cholesterol were measured by Friedewald formula. Lipoprotein ratios ware also calculated. CRP was significantly (p=0.0001) higher among cases (12.60±3.30) compared to controls (5.47±4.29). CRP >9.5 correctly (efficacy) predicted DM2 with DN among 46.7% cases with sensitivity and specificity of 93.3 (95%CI=84.4-102.3) and 76.7 (95%CI=61.5-91.8) respectively. The area under the curve (AUC) was also high (AUC=0.85, 95%CI=0.75-0.95). There was a poor correlation of CRP with lipid profile among DM-2 with DN. Linear regression analysis showed that lipid biomarkers such as HDL, LDL, VLDL & total cholestarol-to-HDL ratio as well as BMI and WHR were positive predictors of CRP after adjusted for age and sex. In turn, HDL, LDL, VLDL and TC to HDL ratio level were a negative predictive factor of CRP levels. The increase of 1 unit on HDL was associated with a reduction of 1.25 in CRP levels. However, all the predictors had no statistical significance (p>0.05). In this study, the level of CRP was higher among cases compared to controls. This study also found that CRP >9.5 had good sensitivity and specificity in predicting DM2 with DN.

*Corresponding Author

Name: Preeti Sharma
Phone: 9717248896
Email: prcdri2003@yahoo.co.in

ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v12i1.4216

Production and Hosted by

Pharmascope.org

INTRODUCTION

Diabetic neuropathy is the most common cause of endstage renal disease (ESRD) associated with high rates of morbidity and mortality. It is of utmost importance to emphasise the early identification and treatment of this chronic complication, reducing the medical and economic burden associated with it (Lee and Choi, 2015; Couser *et al.*, 2011). There has been intensive research showing that different serum or urinary bio-markers have variable

S. No: 145

Title of the Collaborative activity: Lead Induced Oxidative DNA Damage among the Occupationally Exposed Workers: A Case-Control Study

Name of the collaborator: Department of Microbiology, Govt. Doon Medical College, Dehrakhas, Patelnagar, Dehradun, Uttarakhand, India.

Name of the participants: Jyoti Batra, Ajit Thakur

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article S. No: 145

DOI: 10.7860/JCDR/2020/43682.13572

Lead Induced Oxidative DNA Damage among the Occupationally Exposed Workers: A Case-Control Study

Biochemistry Section

JYOTI BATRA[1], AJIT THAKUR[2], DEEPAK JUYAL[3], SHRAWAN KUMAR MEENA[4]

ABSTRACT

Introduction: The element Lead (Pb), which is considered as one of the most widely distributed enviornmental contaminants plays an important role in various industrial enterprises in India; hence bio-monitoring of occupationally exposed subjects becomes imperative. Adverse effects associated with Pb exposure, if identified at initial stages, can not only reduce the prolonged exposure but the carcinogenic risk as well.

Aim: To evaluate the blood Pb levels and the associated DNA damage among the workers in Jaipur, Rajasthan, India who were occupationally exposed to Pb.

Materials and Methods: This cross-sectional, case-control study was conducted for a period of three years from January 2016 to December 2018. A total of 220 subjects were included in the study (110 in each, Pb-exposed group and control group). Confounding factors like age, alcohol consumption, smoking and duration of working years were also investigated. The selection of cases was based on a predesigned questionnaire. The blood Pb levels were quantified by using an Inductively Coupled Plasma Mass Spectrometry (ICP-MS) technique based on triple quadropole technology (iCAP™ TQ ICP-MS) and the DNA damage in the blood lymphocytes was analysed using alkaline comet assay. The data were analysed through student's t-test.

Results: The mean blood Pb levels (38.03 µg/dL) and the mean % of tail DNA (14.80 µm) of the exposed group were found to be significantly higher when compared to the control group (4.89 µg/dL and 6.12 µm, respectively). The blood Pb values and the level of DNA damage were significantly different for smokers in comparison to non-smokers in the exposed group. The blood Pb levels of the exposed subjects positively correlated with the years of exposure. Higher DNA damage was also found in subjects with prolonged exposure to Pb.

Conclusion: Present study results showed that exposure to Pb induces genotoxic effects in peripheral lymphocytes, as measured by comet assay, a rapid and sensitive method suitable for bio-monitoring studies. The increased blood levels and the associated DNA damage observed in the exposed subjects mandates the routine periodical screening of such workers for evaluation of the genotoxic effects of Pb. Effective and efficient preventive measures need to be taken, not only to improve the working conditions but also to ensure better safety measures to minimise the occupational exposure of the workers towards Pb.

Keywords: Blood lead level, Comet assay, Genotoxicity, Occupational lead exposure

INTRODUCTION

Lead (Pb) is a ubiquitous, non-biodegradable, environmental chemical and occupational contaminant that is widely distributed around the world [1]. It possesses some unique physical and chemical properties viz. malleability, ductility, anti-corrosiveness, poor conductivity and softness, by the virtue of which Pb finds its application in various industries worldwide, since time immemorial [2]. Currently Pb is used in industries such as battery manufacturing, smelting, jewellery making, mining, paints, ceramics, porcelain dyes, rubber and folk remedies [3]. Due to the widespread use of Pb in such industries, occupational exposure to Pb among the workers can cause significant toxic effects in their central nervous, haematopoietic, renal, gastrointestinal, cardiovascular and reproductive systems. [4]. Moreover there is a growing degree of evidence that, long term Pb exposure may contribute to an increased risk of cancer development [5]. The International Agency for Research on Cancer has classified inorganic Pb compounds into Group 2A of probable human carcinogens [6]. A few investigations on Pb exposed subjects showed an association between enhanced risk of cancers of the stomach, lung and bladder, and exposure to Pb [7-9]. Occupational exposure to Pb has been found to be associated with approximately 2-8% of all such cancer cases [10].

Mechanisms by which Pb can cause cancer are still unclear, however various possible mechanisms have been proposed regarding carcinogenic properties of Pb, which may act at cellular or molecular level. Pb can induce DNA damage through direct or indirect interactions and thereby enhance or promote the process of carcinogenesis. Pb can inhibit the activity of many enzymes and contributes to oxidative stress, increases rate of DNA single and double strand breaks, DNA protein crosslinks, induces micronuclei formation, chromosomal aberrations and causes DNA damage [11-13]. Moreover, Pb can enhance the genotoxicity of other DNA damaging agents (such as UV light, X-rays and certain chemicals) and thus act as co-mutagen, predominantly by interfering with DNA replication fidelity and repair processes [11,14]. Pb can also alter chromosome segregation because it interacts with cytoskeleton proteins [1].

Pb plays an important role in various small and large scale industrial enterprises in India; hence bio-monitoring of occupationally exposed subjects becomes imperative. In order to reduce the exposure and carcinogenic risk, identification of the adverse effects at the earliest is crucial; hence the goal of the present study was to evaluate the blood Pb levels and the associated DNA damage among the workers in Jaipur, Rajasthan, India who were occupationally exposed to Pb.

The blood Pb concentrations were quantified using iCAP™ TQ ICP-MS technology. The comet assay also known as alkaline single cell gel electrophoresis assay can provide an estimate of primary DNA damage and hence, it was utilised in the current study to assess the DNA damage in blood lymphocytes among the study subjects. Comet assay is widely used for investigating genotoxicity among human population and is preferred because of the advantages of its application and sensitivity in detecting various kinds of DNA damage.

S. No: 146

Title of the Collaborative activity: Blood lead levels among the occupationally exposed workers and its effect on calcium and vitamin D metabolism: A case-control study

Name of the collaborator: Department of Biochemistry, Pandit Deendayal Upadhyaya Medical College, Churu, Rajasthan, Department of Biochemistry, Jaipur National University Institute of Medical Sciences and Research, Jaipur, Rajasthan

Name of the participants: Jyoti Batra, Ajit Thakur

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 146

J Family Med Prim Care. 2020 May 31;9(5):2388-2393. doi: 10.4103/jfmpc.jfmpc_271_20.
eCollection 2020 May.

Blood lead levels among the occupationally exposed workers and its effect on calcium and vitamin D metabolism: A case-control study

Jyoti Batra [1], Ajit Thakur [1], Shrawan Kumar Meena [2], Lakbir Singh [3], Jainendra Kumar [4], Deepak Juyal [5]

Affiliations

Affiliations

1 Department of Biochemistry, Santosh Medical College, Ghaziabad, Uttar Pradesh, India.
2 Department of Biochemistry, Pandit Deendayal Upadhyaya Medical College, Churu, Rajasthan, India.
3 Department of Biochemistry, Jaipur National University Institute of Medical Sciences and Research, Jaipur, Rajasthan, India.
4 Department of Medicine, Govt. Doon Medical College, Dehrakhas, Patel Nagar, Dehradun, Uttarakhand, India.
5 Department of Microbiology, Govt. Doon Medical College, Dehrakhas, Patel Nagar, Dehradun, Uttarakhand, India.

PMID: 32754507 PMCID: PMC7380760 DOI: 10.4103/jfmpc.jfmpc_271_20
Free PMC article

Abstract

Introduction: Lead (Pb) is one of the major occupational pollutants present in the developed and developing countries including India. In humans, Pb can cause a wide range of biological effects depending upon the level and duration of exposure. The goal of this study was to evaluate the blood lead levels (BLLs) and its associated effects on vitamin D and calcium metabolism, among the workers occupationally exposed to Pb.

Materials and methods: This cross-sectional, case-control study was conducted for a period of 18 months (January 2017 to July 2018). A total of 160 subjects were included in the study (80 in each, Pb-exposed group and control group). The blood Pb levels were quantified by using an inductively coupled plasma mass spectrometry with triple quadrupole technology (iCAP™ TQ ICP-MS). Other biochemical parameters were estimated using fully automatic analyzer by RANDOX, RX-imola, Crumlin, UK and Johnson and Johnson, VITROS® ECiQ, Immunodiagnostic system, Ortho Clinical Diagnostics, New Jersey, USA.

Results: Upon analysis it was observed that serum calcium, phosphorous, and vitamin D levels were significantly decreased (8.35 ± 0.42 mg/dl, 3.07 ± 0.34 mg/dl, and 28.82 ± 10.81 ng/ml respectively; $P < 0.001$), whereas the BLL and serum iPTH levels were significantly increased (38.02 ± 19.92 µg/dl and 116.78 ± 19.93 pg/ml respectively; $P < 0.001$) in Pb exposed subjects as compared to control subjects.

Conclusion: Our study results demonstrated that high BLL significantly alter vitamin D and calcium metabolism. The data extrapolated from our study emphasizes the necessity of surveillance in exposed workers. As the associated deleterious effects of Pb-exposure can be serious, we propose that a routine-periodical screening of the workers exposed to lead should be conducted.

Keywords: Blood lead level; calcitriol; hypocalcemia; hypophosphatemia; nephrotoxicity; parathyroid hormone.

S. No: 147

Title of the Collaborative activity: Association between Vitamin D and Malondialdehyde in Premenopausal Women &Postmenopausal Women

Name of the collaborator: Department of Biochemistry, Major S.D. Singh medical college & Hospital, Farrukhabad, Uttar Pradesh

Name of the participants: Kedar Prasad Yadav, Jyoti Batra

Year of collaboration: 2019-20

Nature of the activity: Research

Section: Biochemistry

Original Article

ISSN (0): 2347-3398; ISSN (P): 2277-7253

Association between Vitamin D and Malondialdehyde in Premenopausal Women & Postmenopausal Women

Kedar Prasad Yadav[1], Jyoti Batra[2], Uday Narayan Singh[3], Rubi Yadav[4]

[1]Research Scholar, Department of Biochemistry, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, [2]Professor & Dean (Research), Department of Biochemistry, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, [3]Professor & Head, Department of Biochemistry, Major S.D. Singh medical college & Hospital, Farrukhabad, Uttar Pradesh, [4]Principal, Major S.D. Singh college of nursing, Farrukhabad, Uttar Pradesh.

Abstract

Background: In the menopausal women, the osteoporosis is characterized by low bone mass leading to enhanced bone fragility and consequent increase in bone fracture risk. These risks are due to calcium & vitamin D deficiency, which occur due to less amount of estrogen production during menopausal age. Aim: To find out the association between vitamin D and Malondialdehyde in Menopausal women. **Subjects and Methods:** Serum vitamin D and Malondialdehyde levels were measured in 155 postmenopausal women (46-60 years) by using standard methods. They have been compared with 155 premenopausal women (30-45 years) by using student t-test. **Results:** Serum vitamin D was significantly decreased in postmenopausal women ($p<0.0001$) as compared to premenopausal women; whereas the serum malondialdehyde level was found to be significantly increased in postmenopausal women ($p<0.0001$) as compared with premenopausal women. **Conclusion:** The present study findings indicate decreased levels of serum vitamin D and increased the level of serum malondialdehyde in postmenopausal women. These changes can be used as a good marker for identifying bone related disorders in postmenopausal women. Intimation with supplementation at an early stage may further prevent bone disorder in the later stage of menopause.

Keywords: Malondialdehyde, Postmenopausal women, Premenopausal women, Vitamin D.

Corresponding Author: Dr. Jyoti Batra, Professor & Dean (Research), Department of Biochemistry, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh.

Received: November 2019
Accepted: November 2019

Introduction

Vitamin D deficiency is now a day's widely discussed topic in medicine. The lipophilic vitamin D plays an important role in calcium homeostasis and bone metabolism and in addition seems to decrease the risk of important chronic illnesses such as cancer, infectious and cardiovascular disease. Beside vitamin D3 and vitamin D2 plays an important role in food supplementation. [1-4] However, Human obtains vitamin D mainly from exposure to sunlight, and from their diet and from dietary supplements. The impact of vitamin D supplementation in food to prevent osteoporosis and other illnesses therefore seems likely. [5]

Oxidative stress plays an integral role in the aging process and results from the overproduction of free radicals such as reactive oxygen species, which overwhelm the body's antioxidant defense mechanisms.[6,7] The marked reduction in the estrogen has been shown to increase levels of oxidative stress in the body, depending on the concentration and chemical structure of this hormone.[8] In the healthy, premenopausal women there is usually an appropriate balance between free radical species and antioxidant mechanisms. As such, the level of oxidative stress in these women is not sufficient enough to affect the ovaries until the onset of menopause. It has been noticed that the menopause creates a pro-oxidant state in the body due to decline in natural antioxidant i.e. estrogen. [6,9]

Subjects and Methods

This was a cross-sectional type of study, carried out in the Department of Biochemistry, Santosh Medical College & Hospital, Ghaziabad in collaboration with Department of Biochemistry at Major S. D. Singh Medical College & Hospital, Farrukhabad, Uttar Pradesh, India. Total three hundred ten healthy women were included, out of which 155 were healthy pre-menopausal and 155 were post-menopausal women attending outpatient department of Obstetrics & Gynecology at Major S. D. Singh Medical College & Hospital, Farrukhabad, Uttar Pradesh, India and fulfilling the defined criteria were included in the study till the desired sample size is reached. Ethical committee and written informed consent were obtained from study subjects.

Inclusion criteria

The women were apparently healthy.

Control Group: - Women with the reproductive age group 30 – 45 years, with a normal menstrual cycle.

Study Group: - Post-menopausal women 46 – 60 years,

S. No: 148

Title of the Collaborative activity: Social Determinants of Menstrual Hygiene among School-Going Girls in a Rural Area of Southern Haryana, India

Name of the collaborator: Department of Forensic Medicine, Indira Gandhi Medical College,

Departments of Internal Medicine and Community Medicine, SHKM Government Medical College, Nalhar, Haryana,

Name of the participants: 1.Avinash Surana, 2. Abhishek Singh, 3.Deepika Agrawal, 4.Virender Kumar Chhoker

Year of collaboration: 2019-20

Nature of the activity: Research

S. No:148

ORIGINAL ARTICLE

Year : 2020 | Volume : 3 | Issue : 3 | Page : 117-123

Social determinants of menstrual hygiene among school-going girls in a rural area of Southern Haryana, India

Avinash Surana[1], DR Rajesh[2], Rakesh Tank[3], Abhishek Singh[4], Vikas Gupta[5], Deepika Agrawal[6], Virender Kumar Chhoker[7]

[1] Additional Health Director, Infantry Division, 14 Coprs, Bareilly, India

[2] Department of Forensic Medicine, Indira Gandhi Medical College, Puducherry, India

[3] Department of Internal Medicine, SHKM Government Medical College, Nalhar, Haryana, India

[4] Department of Community Medicine, SHKM Government Medical College, Nalhar, Haryana, India

[5] Department of Community Medicine, Government Medical College, Shahdol, Madhya Pradesh, India

[6] Department of Community Medicine, Santosh Medical College, Ghaziabad, Uttar Pradesh, India

[7] Department of Forensic Medicine, Santosh Medical College, Ghaziabad, Uttar Pradesh, India

Date of Submission	19-May-2020
Date of Decision	06-Jul-2020
Date of Acceptance	11-Jul-2020
Date of Web Publication	27-Jul-2020

Correspondence Address:
Vikas Gupta
Department of Community Medicine, Government Medical College, Shahdol, Madhya Pradesh
India
Login to access the email ID

Source of Support: None, **Conflict of Interest:** None

crossref Citations 1

DOI: 10.4103/SHB.SHB_33_20

Abstract

Introduction: Several factors associated with menstrual hygiene are modifiable and if such factors are identified and addressed, it can go a long way in promoting good menstrual hygiene practice among adolescent girls. The present study was conducted with an aim to investigate the social determinants for menstrual hygiene-related knowledge and practices among rural school-going girls. **Methods:** This cross-sectional study included 649 school-going girls (12–19 years) from two government schools. A pretested, predesigned, standardized questionnaire was prepared which included demographic details such as age, sociodemographic characteristics, knowledge regarding menstruation, restrictions practiced, absenteeism during menstruation, the practice of menstrual hygiene. Multiple logistic regression model at a significant level of 0.05 was used. **Results:** The mean age of menarche in the study population was 12.8 ± 1.73 years. Mother's

S. No: 149

Title of the Collaborative activity: Estimation of prevalence of dengue viral infection among clinically suspected patients attending a tertiary care centre in Uttar Pradesh, India

Name of the collaborator: Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India, Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India

Name of the participants: Malay Bajpai

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Advances in Medicine
Kumar A et al. Int J Adv Med. 2020 Sep;7(9):1414-1417
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: http://dx.doi.org/10.18203/2349-3933.ijam20203607

Original Research Article

Estimation of prevalence of dengue viral infection among clinically suspected patients attending a tertiary care centre in Uttar Pradesh, India

Amit Kumar[1], Rachana Kanaujia[2]*, Malay Bajpai[3]

[1]Department of Microbiology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh, India
[2]Department of Microbiology, Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India
[3]Department of Pathology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh, India

Received: 12 July 2020
Accepted: 04 August 2020

***Correspondence:**
Dr. Rachana Kanaujia,
E-mail: rachanakanaujia@yahoo.com

ABSTRACT

Background: Dengue virus infection is fastest spreading, mosquito borne viral disease in the world with an estimated 3.9 billion people at risk of infection. Dengue is notifiable disease in India, but real number of cases could not be identified many times due to the under-reporting or misdiagnosis of cases. The purpose of the present study was to estimate prevalence of dengue viral Infection among suspected patients attending a tertiary care centre.
Methods: Blood samples from suspected patients were collected over a period of 1 year and were analysed for dengue virus specific IgM antibodies and NS1 antigen by immuno-chromatographic method.
Results: Total 196 samples were tested out of which 43 (21.43%) showed laboratory evidence of dengue. Maximum samples were received during monsoon and post-monsoon period. Dengue sero-positivity was found to be highest in post monsoon period i.e., October-November. Maximum dengue positivity rate was found in the age group of 16-45 years.
Conclusions: For estimation of true burden of dengue in India and its geographical mapping to control further disease transmission; laboratory-based active surveillance systems are required along with passive surveillance and control programs.

Keywords: Dengue virus infections, Immunoglobulin M antibodies, Mosquito borne diseases, Non-structural protein antigen

INTRODUCTION

Dengue virus infection is fastest spreading, mosquito borne viral disease in the world with an estimated 3.9 billion people at risk of infection.[1,2]

It is caused by dengue virus (DEN- 1 to DEN-4 serotypes) belonging to the family Flaviviridae, may present with wide variety of clinical illnesses ranging from mildly symptomatic dengue fever (DF) to more life-threatening dengue shock syndrome (DSS) and dengue hemorrhagic fever (DHF).[3,4]

Dengue is endemic in almost all states of India, with variations in risk influenced by rain fall, temperature, transport; rapid and unplanned urbanization.[5-7]

Dengue is notifiable disease in India, but real number of cases could not be identified many times due to the under-reporting or misdiagnosis of cases.[8-10]

The purpose of the present study is to estimate prevalence of dengue viral infection among suspected patients attending a tertiary care centre from January to December 2019.

S. No: 150

Title of the Collaborative activity: Effect of Antiepileptic Drugs on Liver Function Tests and Biochemistry Lipid Profile in Paediatric Age Group in Okhla Industrial Area

Name of the collaborator: Department of Biochemistry, Mayo Institute of Medical Sciences, Barabanki, Uttar Pradesh, Esic Hospital, Okhla Industrial Area, Delhi-110020

Name of the participants: Juhi Aggarwal

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article ISSN (O):2395-2822; ISSN (P):2395-2814

Effect of Antiepileptic Drugs on Liver Function Tests and Lipid Profile in Paediatric Age Group in Okhla Industrial Area.

Juhi Aggarwal[1], Niharika Singh[2], Mayur Kumar[3]

[1]Associate Professor, Department of Biochemistry, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh -201009.
[2]Tutor, Department of Biochemistry, Mayo Institute of Medical Sciences, Barabanki, Uttar Pradesh -225001.
[3]Specialist Grade II, Esic Hospital, Okhla Industrial Area, Delhi-110020.

Received: March 2019
Accepted: April 2019

ABSTRACT

Background: Epilepsy is the fourth most common neurological disease and affects people of all ages. There are 150,000 new cases of epilepsy every year.The highest incidence of epilepsy in children coupled with the need of long-term antiepileptic treatment could lead to alterations in haemato-biochemical parameters at an early age. Phenytoin and valproic acid are commonly used antiepileptic drugs in children. This study was aimed to assess the serum lipid profile and liver function tests in children with epilepsy on phenytoin or valproic acid monotherapy for 6 months and their control counter-parts. **Methods:** This case control study recruited children from the pediatric outpatient department of Esic Hospital, Okhla. All consecutive children diagnosed with epilepsy as per International League against Epilepsy definition on phenytoin or valproic acid monotherapy for 6 months were enrolled along with the percentage distribution of type of seizures they were suffering. After baseline clinical and anthropometric evaluation (including body mass index [BMI]), the fasting blood samples were analyzed for serum lipid profile and liver function changes. **Results:** Total of 133 children were enrolled. There were 42 and 36 patients in phenytoin and valproic acid groups respectively and 55 in normal healthy control group. We observed statistically significant high mean total cholesterol and alkaline phosphatase levels in group receiving phenytoin when compared with valproic acid or control group. **Conclusion:** The lipid and liver enzyme abnormalities may be observed in children on phenytoin or valproic acid therapy, which warrants careful screening and monitoring as young children have immature detoxification mechanisms and a greater variability in dosing owing to a wider range of body size and weight. New epilepsy research should be integrated in areas i.e. Genomics, neuroimaging, neuropsychology and neuropathology for better understanding of the disease and to improve the global health outcomes.

Keywords: epilepsy, seizure, valproic acid, phenytoin, lipid profile, liver function test.

INTRODUCTION

Epilepsy is a disrupt systematic functioning of brain characterised by the periodic and unpredictable occurrence of seizure. The word 'Seizure' refers to a transient alteration of action, behaviour and performance due to the disordered, synchronous, and rhythmic firing of populations of brain neuron. The episodes of seizures are unpredictable or uncertain and their frequency is highly variable.[1]

As per WHO, epilepsy is one of the most common serious brain disorder that affects not only the individual, but also disturbs the family and the society in general. WHO estimates that 8 per 1000 population worldwide have epilepsy, with higher prevalence in developing countries as compared to developed countries. Further, there are approximately around 10 million people estimated to be with epilepsy in India accounting for 1/5th of the global burden. The main causes of epilepsy under consideration are head injuries, cerebrovascular disease, CNS infections, Cerebral malformations, degenerative brain diseases and birth trauma.[2]

Most children with epilepsy are treated with medication. Doctors will not usually prescribe medicine until after a child has had more than one seizure and been diagnosed with epilepsy. They often need to try a few different antiepileptic (seizure-preventing) drugs before the right one is found.[3]

For drug metabolism and elimination of many antiepilectic drugs (AEDs), liver is the primary organ and thus is subjected to drug-induced toxicity. There is a wide range of hepatotoxic reactions, from mild and transient increase of hepatic enzymes to fatal hepatic failure.[4]

Conventional AEDs as monotherapy are commonly adviced to use in developing countries with limited resources .Though most prefer phenytoin (PHT) as

Name & Address of Corresponding Author
Dr. Juhi Aggarwal,
Associate Professor,
Department of Biochemistry,
Santosh Medical College and Hospital,
Ghaziabad, Uttar Pradesh -201009.

S. No: 151

Title of the Collaborative activity: The Effect of Hyperthyroidism on the Level of Urinary Neutrophil Gelatinase Associated Lipocalin and Markers of Kidney Function

Name of the collaborator: School of Dental Sciences, Sharda University, Gautambudh Nagar, Uttar Pradesh, India

Name of the participants: Jyoti Batra

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

S. No: 151

DOI: 10.7860/JCDR/2020/43913.13721

The Effect of Hyperthyroidism on the Level of Urinary Neutrophil Gelatinase Associated Lipocalin and Markers of Kidney Function

Biochemistry Section

SUYASH SAXENA[1], JYOTI BATRA[2], MAHESH CHANDER CHHABRA[3], GLADYS RAI[4]

ABSTRACT

Introduction: Thyroid hormones affect kidneys in various ways ranging from their development to their functions. Serum and urinary Neutrophil Gelatinase-Associated Lipocalin (NGAL) are emerging as the most promising biomarkers for early determination of Acute Kidney Injury (AKI) and Chronic Kidney Disease (CKD).

Aim: To evaluate the effects of hyperthyroidism (subclinical and overt) on the markers of kidney function.

Materials and Methods: In this cross-sectional study, 300 subjects were recruited from May 2015 to June 2018 and divided in three categories of euthyroid, subclinical and overt hyperthyroid subjects. All the subjects were analysed for Thyroid function (Total T_3, T_4, Thyroid Stimulating Hormone (TSH)) and Kidney Function (Serum Urea, Serum Creatinine, Urinary NGAL, estimated Glomerular Filtration Rate (eGFR)).

Results: Statistical analysis revealed a significant decrease in serum urea and serum creatinine in both subclinical (17.32±3.51 mg/dL and 0.58±0.13 mg/dL, respectively) and overt hyperthyroid (13.52±2.78 mg/dL and 0.29±0.10 mg/dL, respectively) patients as compared to euthyroids (19.99±5.38 mg/dL and 0.87±0.25 mg/dL, respectively). Urinary NGAL and eGFR were significantly increased in both subclinical (30.24±8.63 ng/mL and 119.57±11.31 mL/min, respectively) and overt hyperthyroid (44.05±13.02 ng/mL and 155.12±19.75 mL/min, respectively) patients as compared to euthyroids (21.94±18.06 ng/mL and 97.97±25.92 mL/min, respectively). A negative correlation of creatinine and positive correlation of urinary NGAL and eGFR with T_3 and T_4 was observed in both subclinical and overt hyperthyroidism ($p<0.05$).

Conclusion: The study shows that there are negative effects of hyperthyroidism on kidney functions.

Keywords: Creatinine, Glomerular filtration rate, Lipocalin 2, Serum urea, Thyroid dysfunction

INTRODUCTION

The CKD is emerging as a prevalent and serious threat. A recent study estimated the prevalence of CKD to be 17.2% out of which 7% were with only stage one [1]. Thyroid and kidneys share a special relation. Any dysfunction of thyroid can change Renal Blood Flow (RBF), GFR, electrolyte homeostasis, tubular function and kidney structure. Also, kidney helps in the metabolism, degradation and excretion of thyroid hormone and its metabolites. Hyperthyroidism results in increased RBF and GFR [2] by increase in positive chronotropic [3] and inotropic effects [4] as well as reduction in systemic vascular resistance [5]. Tri-iodothyronine increase, results in the increased tubular mass, renal mass and tubular re-absorptive capacity [6].

Raised level of Urinary-*N*-acetyl-β-D-glucosaminidase (NAG) in hyperthyroidism shows disruption of glomerular basement membrane due to hyper filtration, hypertrophy and hyperplasia [7]. It ought to be emphasised and taken care of by the primary care physicians to screen for early kidney damage in cases of hyperthyroidism. Serum creatinine and urea are the conventional markers to assess kidney function but both of them can be affected by various other factors.

NGAL is also known as human neutrophil lipocalin, lipocalin-2, siderocalin, 24p3, or Lcn2. NGAL is a petite protein which has 178 amino acids in its structure and belongs to the family of lipocalins. These proteins are specialised in capturing and transferring small hydrophobic molecules. NGAL, similar to the other members of lipocalins, is able to attach to some ligands, including the siderophores. NGAL reacts with iron-binding siderophores that gives it, characteristic bright red colour and modulates most of its biological effects. Numerous tissues including lungs, trachea, stomach, colon and kidneys exude NGAL at low levels. In case of any kidney damage NGAL is rapidly released from renal tubular cells which lead to an increase in the level of serum and urinary NGAL [8,9].

Kidneys seem to be the chief source of NGAL, but quite a few studies [10,11] have demonstrated that acute renal injury results in an augmented expression of NGAL mRNA in distant organs, such as liver and lungs, causative to the increased levels. All these reasons can further raise urinary levels of NGAL as a result of insufficient reabsorption of the filtered NGAL molecule. Being a minuscule protein molecule, NGAL is freely filtered by the glomerulus, and most of it is reabsorbed in the proximal tubules by efficient megalin-dependent endocytosis. Any NGAL excretion through urine is possible only when there is an associated proximal renal tubular injury that precludes NGAL reabsorption and/or increased de novo NGAL synthesis. Serum and urinary NGAL are emerging as the most promising biomarkers for early determination of AKI. Various studies have recognised the role of NGAL in CKD and showed serum and urinary NGAL levels are the potential markers of kidney dysfunction and severity in CKD [12-14].

So the present study aimed to evaluate the levels of traditional biochemical markers of kidney function and urinary NGAL in patients of hyperthyroidism.

MATERIALS AND METHODS

This was a cross-sectional study, conducted in the Department of Biochemistry, Santosh Medical College and Hospital, Ghaziabad, Delhi-NCR, India from May 2015 to June 2018. Sample size was estimated according to the prevalence [15] of subclinical and overt hyperthyroidism. A total 300 subjects were recruited from the medicine OPD and divided in 3 groups: (i) Euthyroid (100 subjects); (ii) Subclinical Hyperthyroid (100 subjects); (iii) Overt Hyperthyroid (100 subjects).

The approval vide letter no. SU/2015/793(1) was taken from local Ethics Committee. The procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, revised in 2013.

S. No: 152

Title of the Collaborative activity: Utility Of High-Sensitivity C - Reactive Protein (Hscrp) & Lipid Profile In Myocardial Infarction

Name of the collaborator: Department of Biochemistry, G.S.V.M. Medical College Kanpur, India

Name of the participants: 1.Manish Kr Verma. 2.Pradeep Kumar, 3.Preeti Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

Utility Of High-Sensitivity C - Reactive Protein (Hscrp) & Lipid Profile In Myocardial Infarction

Manish Kr Verma[1], Pradeep Kumar[1], Preeti Sharma [1,] Anand Narayan Singh[2],

[1]Department of Biochemistry, Santosh Medical College and Hospital (Santosh University), Ghaziabad, India

[2]Department of Biochemistry, G.S.V.M. Medical College Kanpur, India

ABSTRACT:

Background: Myocardial infarction also known as acute myocardial infarction (AMI) term, which is commonly used for an event of heart attack. The biomarker is possible of using different hsCRP & lipids biochemical marker for predicting risk of myocardial infarction (MI).

Objectives: Utility of high sensitivity C-reactive protein and Lipid Profile levels in Myocardial Infarction.

Patients and Methods: Evaluation of biochemical marker and examined by the cardiologist of confirming myocardial infarction patients and healthy control of all age groups from the period of January 2018 to December 2019. This study divided into two groups: group A: 55 Myocardial Infarction patients; group B: 55 healthy control subject. Comparison between lipid profiles & High sensitivity C Reactive Protein, including serum total cholesterol, low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, and triglycerides, in 55 myocardial infarction patients. Patients included 29 (52.8%) STEMI patients, 4 (7.2%) NSTEMI patients and 22 (40%) patients with chest pain. Control group age and gender-matched normal subjects are included.

Results: The levels of lipid profile and hsCRP in case and control subjects were significant (p value= 0.0001**) high in the myocardial infarction patients. Myocardial infarction patients had significant higher levels of hsCRP, TC, LDL, VLDL, TG, LDL/HDL, TC/HDL and decreased level of HDL as compared to the control subjects.
Conclusions: Elevated hsCRP has a strong significant association with lipid profile in myocardial infarction. These data suggest that inflammatory processes play a self-regulating role in the pathogenesis of myocardial infarction.

Key Word: Lipid Profile, hsCRP, Chest Pain, Myocardial Infarction, Hypertension, Diabetes, Dyslipidemia.

INTRODUCTION:

Myocardial infarction (MI) is major cause of necrosis resulting from acute obstruction of a coronary artery. Myocardial infarction is one of the important reasons of mortality and unhealthiness in the world. Various risk factors for Myocardial infarction have been reported, including age, gender, race and family history and an another risk factors, like serum

S. No: 153

Title of the Collaborative activity: To Study the Relationship of Human Circadian Rhythm with Body Mass Index & Mini Mental State Examination

Name of the collaborator: Department of Physiology, Manav Rachna Dental College, Faridabad, India, Department of CTVS, Govind Ballabh Pant Institute of Postgraduate Medical Education and Research, New Delhi

Name of the participants: 1.Rinku Garg, 2.Himanshu Thukral

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 153

International Journal of Health Sciences and Research
Vol.10; Issue: 5; May 2020
Website: www.ijhsr.org
ISSN: 2249-9571

Original Research Article

To Study the Relationship of Human Circadian Rhythm with Body Mass Index & Mini Mental State Examination

Anupama V. Betigeri[1], Rinku Garg[2], Vithalkumar M. Betigeri[3], Himanshu Thukral[4]

[1]Reader, Department of Physiology, Manav Rachna Dental College, Faridabad, India
[2]Professor, [4]PhD Scholar,
Department of Physiology, Santosh Medical College & Hospitals, Santosh Deemed to be University Ghaziabad, India
[3]Professor, Department of CTVS, Govind Ballabh Pant Institute of Postgraduate Medical Education and Research, New Delhi

Corresponding Author: Himanshu Thukral

ABSTRACT

Background: There is individual difference of morningness-eveningness based on intrinsic biological rhythms of a person. Many studies shows a relationship between measures of morningness - eveningness preference (MEQ) score with mini-mental state examination (MMSE) & body mass index (BMI). Our study explores the relationship of these factors to grading the cognitive state of undergraduate dental students.
Method: A total of 49 individuals provided with morning-evening questionnaire (MEQ) for the information on circadian rhythm. Their cognitive ability was assessed using mini mental state examination questionnaire (MMSE). Shapiro-Wilk test and Wilcoxon test were applied using R software (v.3.2.2). P value was considered to be significant at ($p<0.05$).
Results: On the basis of analysis, the students were divided into evening type and morning type. Cognitive assessment of both morning type and evening types shows significant difference between them with evening type have significantly lower MMSE score. Also evening type participants were having higher BMI than morning types.
Conclusion: In this study it seen that evening chronotype participants are more obese with low cognitive score in comparison to morning chronotype participants.

Keywords: Cognition, circadian rhythm, chronotype

INTRODUCTION

Circadian rhythm is a 24 hour internal physiological cycle that regulates physical, mental and behavioural changes. Although it can be modulated with the external environment such as sunlight-moonlight and temperature. [1,2] It is clearly evident that activities in the brain, enzyme-hormonal balance, cells regulation and many other biological activities are related to circadian clock. If there is any disturbance in harmonization between environments externally and internally, we may experience serious health consequences which further damages body and leads us to increased risk for various diseases.

Morning-Evening pattern of circadian rhythm in humans or their chronotype patterns are predicting markers for various factors affecting life of individuals whether it is related to health, academics or emotions. Morning individuals are those who wake up early in the morning, fresh, highly active and healthy generally known as lark "a morning bird". [3] Evening type are those who have difficulty in waking

S. No: 154

Title of the Collaborative activity: Student exchange

Name of the collaborator: Murshidabad Medical College & Hospital,

Berhampore, West Bengal

Name of the participants: Sehenza Pravin

Year of collaboration: 2019-20

Nature of the activity: Intership

S. No: 154

Murshidabad Medical College & Hospital

73, Station Rd, Raninagar, Gora Bazar, Berhampore, West Bengal 74210
Phone: 03482274095
Website: www.msdmch.org

INTERNSHIP COMPLETION CERTIFICATE

This is to certify that Ms. Sehenaz Parvin, has passed MBBS Final year from Santosh Medical College & Hospital, Ghaziabad under Santosh University, Ghaziabad in February-March 2020 bearing registration No. 950115082. She has undergone 3 month 5 days compulsory rotatory Internship Training at Murshidabad Medical College & Hospital, Berhampore, West Bengal w.e.f 1st April 2020 to 4th July 2020 in the following departments and has satisfactorily completed her internship training:-

Sl No	Department	Period
1.	Orthopaedic	1st April to 30th April
2.	Pediatrics	1st May to 31st May
3.	Casualty	1st June to 15th June
4.	Elective Posting Department	16th June to 30th June
5.	ENT	1st July to 4th July

04/07/2020

Prof. (Dr.) Manju Banerjee
Principal
Murshidabad Medical College & Hospital
Berhampore, Dist. Murshidabad,
West Bengal

S. No: 155

Title of the Collaborative activity: Student exchange

Name of the collaborator: Jawaharlal Nehru Institute of Medical Sciences, Porompat

Name of the participants: Supriya Thongram

Year of collaboration: 2019-20

Nature of the activity: Intership

S. No: 155

Jawaharlal Nehru Institute of Medical Sciences

POROMPAT, IMPHAL - 795 005

Phones : 0385-2443144 (Dir), 0385-2443142 (Office), Fax : 0385-2443142

Email : jnims.2009@gmail.com

Website : www.jnims.nic.in

Ref. No. ..JIMS/Academic.3(26) Internee/15 Date ...29/08/2020.....

INTERNSHIP COMPLETION CERTIFICATE

This is to certify that Ms. Supriya Thongram, has passed MBBS Final year from Santosh Medical College & Hospital, Ghaziabad under Santosh University, Ghaziabad in February - March 2020 bearing Registration No. 950115092. She has undergone 4 (Four) Months and 22 (Twentytwo) days Compulsory Rotatory Internship Training at Jawaharlal Nehru Institute of Medical Sciences Hospital, Imphal, Manipur w.e.f 7th April, 2020 to 29th August, 2020 in the following Departments and has satisfactorily completed her internship training :-

Sl. No.	Department	Period
1.	Ophthalmology	07/04/2020 to 21/04/2020
2.	Otorhinolaryngology	22/04/2020 to 06/05/2020
3.	Elective (Dermatology)	07/05/2020 to 21/05/2020
4.	Orthopaedic (including 10 days in PMR)	22/05/2020 to 20/06/2020
5.	Pediatrics	21/06/2020 to 20/07/2020
6.	Casualty	21/07/2020 to 04/08/2020
7.	Surgery (including 15 days in Anaesthesiology)	05/08/2020 to 29/08/2020

This institute is recognized by Medical Council of India (MCI) vide [No. U.12012/224/2015-ME(P.II)] of dated 17th April, 2015.

29/8/2020

(Prof. H. Lokhendro Singh)
DEAN (Academic)
JNIMS, Porompat

Dean (Academic)
J.N. Institute of Medical Sciences
Porompat, Imphal

S. No: 156

Title of the Collaborative activity: Student exchange

Name of the collaborator: Civil Hospital, Gurugram

Name of the participants: Vayom Thapar

Year of collaboration: 2019-20

Nature of the activity: Intership

S. No: 156

No - 57
01/02/2021

CIVIL HOSPITAL, GURUGRAM

OFFICE OF THE PRINCIPAL MEDICAL OFFICER, GURUGRAM

HARYANA

As per the order of Civil Surgeon, Gurugram office letter no. ES1-1/2020/801 dated 01/04/2020, it is certified that Dr. VAYOM THAPAK MBBS intern has completed his/her compulsory rotating internship training from 07/04/2020 to 31/1/2021 in Civil Hospital, Gurugram. During this period his/her work and conduct have been found satisfactory.

Incharge Interns
Civil Hospital, Gurugram

INCHARGE INTERNS
CIVIL HOSPITAL, GURUGRAM

Principal Medical Officer
Civil Hospital, Gurugram

Principal Medical Officer
Civil Hospital, Gurugram

S. No: 157

Title of the Collaborative activity: Student exchange

Name of the collaborator: Moti Lal Nehru Medical College, Prayagraj

Name of the participants: Arjita Singh

Year of collaboration: 2019-20

Nature of the activity: Intership

S. No: 157

OFFICE OF THE PRINCIPAL MOTI LAL NEHRU MEDICAL COLLEGE PRAYAGRAJ

No. SS/2020/ Dated 10 July 2020

To ,

The Dean,
Santosh Medical College,
Ghaziabad, U.P.

Sir,

In connection to the lockdown due to COVID-19 and the letter of DGME, Lucknow, No ME-3/2020/626 dated 31.03.2020, it is certified that **Ms. Arjita Singh**, Intern student (MBBS) in your Medical College has done her internship posting from, SRN Hospital, affiliated to this Medical College, accordingly to the period written in front of the respective department's namely.

S.N.	Name of Intern	Period	
		From	To
1	Surgery Including Anesthesiology	01/04/2020	31/05/2020
2	Obstetrics & Gynecology including Family Welfare Planning	01/06/2020	10/07/2020

It is also certified that no stipend for the internship has been given to her for the above said period.

Principal
MLN Medical College
Prayagraj

No. SS/2020/ 5596 Above Dated

Copy to the following of necessary action

1- DGME, Lucknow.
2- SIC, SRN Hospital, Prayagraj.
3- Concerned Intern.

Principal
MLN Medical College
Prayagraj

S. No: 158

Title of the Collaborative activity: A study of microscopic changes in the placenta in gestational diabetes mellitus

Name of the collaborator: 1. SL Tewarson-Department of Pathology, GMC, Azamgarh, Uttar Pradesh, India

Name of the participants: Singh, V., Ranjan, K., Tewarson, S.L.

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 158

SANTOSH UNIVERSITY
(Established u/s 3 of the UGC Act, 1956)

VARUN ARJUN MEDICAL COLLEGE & ROHILKHAND HOSPITAL
VAMRCH
SHAHJAHANPUR
Excellence towards profession

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of GMC, Azamgarh, Uttar Pradesh, India. Collaborates for Research as per following details:

Tittle of Research: **A study of microscopic changes in the placenta in gestational diabetes mellitus.**

Name of Primary Researcher: Singh, V., Ranjan, K., Tewarson, S. L.

Name of the Co-guide - **SL Tewarson**

Research Location: -**Department of Pathology, GMC, Azamgarh, Uttar Pradesh, India**

Designation & Address of Co-guide/Mentor: H.O.D. (Professor), Department of - **Pathology**

Duration of Project: from ..... 2019.....to.....2020.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of
HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar,
Pratap Vihar,
Ghaziabad, Uttar Pradesh
201009

S. No: 159

Title of the Collaborative activity: Musculoskeletal Pain and its Association with School Bag Weight and Diet Intake: A Cross-Sectional Study among School-Going Adolescents in Delhi.

Name of the collaborator: 1. Uma Kumar-Professor & Head, Department of Rheumatology, All India Institute of Medical Sciences, New Delhi

Name of the participants: Maumita Kanjilal, Uma Kumar, Gajendra K Gupta, Deepika Agrawal, R K Arya, Jagmohan Singh Dhakar

Year of collaboration: 2019-20

Nature of the activity: Research

Musculoskeletal Pain and its Association with School Bag Weight and Diet Intake: A Cross-Sectional Study among School-Going Adolescents in Delhi

Maumita Kanjilal[1], Uma Kumar[2], Gajendra Kumar Gupta[3], Deepika Agrawal[4], Ravi Kant Arya[5], Jagmohan Singh Dhakar[6]

[1]PhD Scholar, Department of Community Medicine, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, [2]Professor & Head, Department of Rheumatology, All India Institute of Medical Sciences, New Delhi, [3]Dean, [4]Professor & Head, [5]Professor, [6]Statistician, Department of Community Medicine, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh

Abstract

Background: Prevalence of musculoskeletal pain is increasing in adolescent school students. This study conducted to assess the role of heavy bag packs and faulty dietary habits in the causation of musculoskeletal pain.

Methods: The study was conducted in school going 1600 adolescent school students of Delhi, India from April 2018 to March 2019. The demographic profile, symptoms of pain in neck, shoulder and back was recorded through a validated questionnaire and the simplified dietary gap assessment tool was applied to assess the dietary habits. The weight of the school bag was measured. The prevalence of musculoskeletal pain was 56.8% among adolescent school students. The musculoskeletal pain was significantly higher in those students who were carrying bag weight 10-15% of their body weight and was two times higher than those students who were carrying bag weight less than 10% of their body weight. Students having dietary gap score of less than 5 out of 10 were more prevalent to get musculoskeletal pain than those having dietary score more than 8.

Conclusions: Carrying of heavy school bag weight and gap in the diet among the school going adolescents can lead to musculoskeletal pain.

Key-words: *Musculoskeletal, Pain, Adolescent, Bag, Diet, School*

Introduction

In childhood, pain is a common presentation which becomes disabling when it persists in adolescent stage.[1] Among the types of pains, around 64% are of musculoskeletal origin.[2] The symptoms of pain in school-going adolescents are more common in girls than boys[3] and can be attributed to faulty and stationary postures[4], improper classroom furniture[4] and excessive school bags load affecting the spine.[5]

Heavy schoolbags are a potential risk for musculoskeletal problems among adolescents.[6] School bags heavier than 10% of one's own body weight may result in back and shoulder pains[7], can affect the curvature of lumbar and sacral spine[8] increases musculoskeletal injury risk and affects cardiopulmonary functions.[9]

Poorer general health is also associated with back pain in around 74.4% bag pack user adolescents.[10] The adolescents continue to have unhealthy foods because of the gap in knowledge regarding the unhealthy food ill effects and lack of time.[11]

Corresponding Author:
Dr Gajendra Kumar Gupta
Dean, Santosh Medical College & Hospital
Ghaziabad, Uttar Pradesh
E-mail: gajendrakgupta@gmail.com

S. No: 160

Title of the Collaborative activity: Musculoskeletal Pain and its Risk Factors Among School-Going Adolescents in Delhi, India.

Name of the collaborator: 1. Uma Kumar, Professor and Head, Department of Rheumatology, All India Institute of Medical Sciences, New Delhi-110029

Name of the participants: Kanjilal M, Kumar U, Gupta GK, Agrawal D, Arya RK, Dhakar JS

Year of collaboration: 2019-20

Nature of the activity: Research

Online Journal of Health and Allied Sciences
Peer Reviewed, Open Access, Free Online Journal
Published Quarterly : Mangalore, South India : ISSN 0972-5997
Volume 19, Issue 2; Apr-Jun 2020

Original Article

Musculoskeletal Pain and its Risk Factors Among School-Going Adolescents in Delhi, India

Authors:
Maumita Kanjilal, PhD Scholar, Department of Community Medicine, Santosh University, Ghaziabad, Uttar Pradesh-201009,
Uma Kumar, Professor and Head, Department of Rheumatology, All India Institute of Medical Sciences, New Delhi-110029,
Gajendra Kumar Gupta, Professor and Dean, Department of Community Medicine, Santosh University, Ghaziabad, Uttar Pradesh-201009,
Deepika Agrawal, Professor and Head, Department of Community Medicine, Santosh University, Ghaziabad, Uttar Pradesh-201009,
Ravi Kant Arya, Professor, Department of Community Medicine, Santosh University, Ghaziabad, Uttar Pradesh-201009,
Jagmohan Singh Dhakar, Assistant Professor and Statistician, Department of Community Medicine, Santosh University, Ghaziabad, Uttar Pradesh-201009.

Address for Correspondence
Uma Kumar,
Professor & Head,
Department of Rheumatology,
All India Institute of Medical Sciences,
New Delhi -110029.
E-mail: umaakumar@yahoo.co.in.

Citation
Kanjilal M, Kumar U, Gupta GK, Agrawal D, Arya RK, Dhakar JS. Musculoskeletal Pain and its Risk Factors Among School-Going Adolescents in Delhi, India. *Online J Health Allied Scs.* 2020;19(2):9. Available at URL: https://www.ojhas.org/issue74/2020-2-9.html

Submitted: May 3, 2020; Accepted: Sep 4, 2020; Published: Sep 20, 2020

Abstract: Often ignored musculoskeletal pain among adolescent school students can result in the development of musculoskeletal disorders in adulthood. To determine the prevalence of musculoskeletal pain and its risk factors, a cross-sectional study was conducted on 1600 students (855 males and 745 females) registered in 10 co-educational government schools of Delhi. Demographic details along with Nordic Musculoskeletal, Depression, Anxiety Stress Scale-21, Youth physical activity and modified Sedentary Behaviour Questionnaires (duration of using smartphones and watching television) were administered. The prevalence of musculoskeletal pain was 63% (55-70) at 95% CI. The female gender (p=0.008), moderate to vigorous level physical activity more or less than 60-90 minutes per day (p=0.017), smartphone use ≥ 5 days a week and ≥ 2 hours per day (p=0.02) were the risk factors for developing musculoskeletal pain. The stress (p=0.037), anxiety (p=0.032), and depression (p=0.056) were associated with musculoskeletal pain in Chi-square (X2) analysis.

Key Words: Musculoskeletal pain, Adolescent, Physical activity, Smartphone

Introduction:

The adolescent stage of life undergoes a lot of changes in the physical and mental health with musculoskeletal pain symptoms being one of the common conditions. These symptoms when neglected become a major contributor in the development of musculoskeletal disorders in adulthood.(1) Studies in recent times have shown an increasing prevalence of musculoskeletal pain among adolescents.(2,3) The psychological symptoms, prolonged use of smartphones, watching television for longer duration and lack of physical activity are considered risk factors in the development of musculoskeletal pain.(4-6) The aetiology of musculoskeletal pain in adolescents is multi-factorial.(7)

A study conducted on the Norwegian youth population suggested that multisite adolescent musculoskeletal pain was significantly associated with mental health disorders. Anxiety and mood disorders were risk factors in both genders.(4) An Australian study highlighted the psychosomatic components in children and adolescents having chronic nonspecific musculoskeletal pains. It revealed that those having increased levels of anxiety and depression had more complaints of somatic pain.(8)

Sedentary lifestyle and physical inactivity are considered major contributors to most chronic diseases.(9) High prevalence of low back pain among children and adolescents was found in females, adolescents and those with longer duration of watching TV (television) in a study done in Brazil.(10) It is quite evident that the number of smartphone users among adolescent school children has outgrown dramatically.(11) The study done in South Korea revealed that there is a significant relationship between smartphone use and musculoskeletal discomfort.(12) The number of hours consumed speaking on the phone was a predictor of upper back discomfort. The users tend to develop uncomfortable postures while using smartphones which leads to musculoskeletal disorders. World Health Organization has emphasized on moderate to vigorous level physical activity for 60-90 minutes for adolescents.(13) A study describing the physical activity levels for adults (15 years or older) from 122 countries and adolescents (13-15-years-old) from 105 countries found that the proportion of 13-15-year-old were doing less physical activity than the recommended guidelines.(14)

The present study is a sincere attempt to understand the prevalence of musculoskeletal pain and its association with various factors such as gender, age, psychological health (stress, anxiety, and depression), sedentary behaviour (time

S. No: 161

Title of the Collaborative activity: Surgical Management of RCC in horse shoe kidney.

Name of the collaborator: 1. Deepak Sundriyal – All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India, 2. Sharan Choudhri - Max Saket City Hospital, New Delhi, India

Name of the participants: Gyanendra S. Mittal, Deepak Sundriyal, Sharan Chaudhary

Year of collaboration: 2019-20

Nature of the activity: Research

Case Report

Surgical management of renal cell carcinoma in horse shoe kidney: A case report

Gyanendra S.Mittal[1*], Deepak Sundriyal[2], Sharan Choudhri[3]

[1,3]Surgical Oncologist, [2]Medical Oncologist, [1]Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, [2]All India Institute of Medical Sciences, Rishikesh, Uttarakhand, [3]Max Saket City Hospital, New Delhi, India

***Corresponding Author: Gyanendra S.Mittal**
Email: g20mittal@gmail.com

Abstract
Horse shoe kidney occurs in 0.25% of general population and is more common in men with a 2:1 male to female ratio. Incidence of carcinoma in those with horse shoe kidney is about 3-4 times higher than the general population. Survival is mainly related to the histological grade and stage of the tumor. We present this case as our patient presented with features of anemia due to microscopic haematuria and vague abdominal pain. CECT abdomen and CT angiography diagnosed as heterogeneous mass lesion in the left moiety of horse shoe kidney with an independent vascular supply to the isthmus. Case was successfully operated by nephron sparing surgery with uneventful recovery.

Keywords: Papillary carcinoma, Horse shoe kidney, Nephron sparing surgery.

Introduction
Horse shoe kidney (HSK) was discovered first time in 1521 by Jacopo Berengario da Carpi. It occurs in 0.25% of general population and is perhaps the most frequent anomaly of kidney fusion. In this, two kidneys are joined by isthmus (a parenchymatous or fibrous tissue bridge) at their lower poles. With a male to female ratio of 2:1, it is more frequent in men.[1,2] This phenomenon happens between the 4th and 6th weeks of gestation in the embryo, when ureteral yolk enters into the renal blastema. Renal pelvises face forward and this usually occurs before rotation of the kidney. The calyceal system is atypical in orientation with a wide variation in their blood supply, but number of calyces is usually normal.[3] although etiology of HSK is not completely understood but it may be suggested that alteration in the position of common iliac or superior mesenteric or umbilical artery is responsible. This causes alteration in the rotation and ascent of kidney which at that time situated in the lower part of abdomen.

Incidence of carcinoma in HSK is higher (although exact incidence has not been described), approximately 3-4 times greater than that of general population. Survival is dependent on the histological grade and stage of the tumor.[4] Management approach of the tumor in HSK requires pre-operative imaging to confirm neoplastic growth, its extent and its vascular anatomy. CT angiography with 3-D reconstruction of vasculature is indispensable part of pre-operative work-up, as HSK has wide variation in its vascular supply.[5] Aim of the evaluation should be the complete resection of the tumor with negative margins without removal of normal functioning tissue. We managed a patient of HSK with papillary carcinoma in its left moiety by performing a nephron sparing surgery with uneventful recovery.

Case Report
An elderly lady of age 57 yrs. came to the hospital with complaints of breathlessness on exertion and mild left sided abdominal pain for 1 year. On examination, she had pallor, her abdomen was normal. Her routine blood and biochemical investigations revealed anemia (Hb- 6.7 gm %) and microscopic hematuria. CECT abdomen showed a heterogeneous mass lesion with mixed Hounsfield values of 7.5 cm diameter in the upper pole of the left moiety of a HSK (Fig.1). This kidney was malascended and placed at lower level than normal. 3-D CT angiography and reconstruction of vascular anatomy revealed a separate artery supplying the isthmus (Fig.2).

Fig. 1: Heterogeneous mass upper pole of left moiety of horse-shoe kidney

S. No: 162

Title of the Collaborative activity: Clinico-Pathological Co-relation Using Various Immuno-histochemistry Markers in Carcinoma Breast Patients.

Name of the collaborator: 1. Suraj Manjunath - Dept. of Surgical Oncology, Dharamshila Hospital & Research Centre, Vasundhara Enclave Delhi India

Name of the participants: Gyanendra S. Mittal, Suraj Manjunath, B. Niranjan Naik, Sanjay Deb

Year of collaboration: 2019-20

Nature of the activity: Research

IP Journal of Diagnostic Pathology and Oncology 2020;5(1):30–34

Content available at: iponlinejournal.com

IP Journal of Diagnostic Pathology and Oncology

Journal homepage: www.innovativepublication.com

Original Research Article

Clinico-pathological co-relation using various immuno-histochemistry markers likeER, PR, HER-2 NEU, CK5/6, EGFR, KI-67 in carcinoma breast

Gyanendra S Mittal[1,*], Suraj Manjunath[2], B. Niranjan Naik[2], Sanjay Deb[3]

[1]*Dept. of Surgery, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, India*
[2]*Dept. of Surgical Oncology, Dharamshila Hospital & Research Centre, Vasundhara Enclave, Delhi, India*
[3]*Dept. of Oncology & Pathology, Dharamshila Hospital & Research Centre, Vasundhara Enclave, Delhi, India*

ARTICLE INFO

Article history:
Received 14-12-2019
Accepted 04-02-2020
Available online 29-02-2020

Keywords:
Molecular Clssification
IHC markers
Carcinoma Breast
Triple Negative
Luminal Breast Carcinoma

ABSTRACT

Introduction: In India, for the year 2012, 144,937 women were newly detected with breast cancer and 70,218 women died of it. For every 2 women newly diagnosed with breast cancer, one lady is dying of it. The aim of this study is to evaluate clinical parameters and pathological findings including various Immuno-histochemistry (IHC) markers like ER, PR, HER-2 NEU, CK5/6, EGFR, Ki-67 in cases of carcinoma breast and classify them into molecular classification based on IHC markers and try to correlate them clinically.
Materials and Methods: This prospective, observational study was carried out in 56 patients with early carcinoma breast (stage-I and stage-II) and IHC evaluation for various markers was done. Data was analysed by using Molecular Classification, divide them into estrogen positive (luminal HER-2, luminal A and luminal B) and estrogen negative (Triple negative or basal cell type, HER-2Neu type and normal breast like phenotype) subtypes. We had correlated this data with parameters like age of the patient, clinical and pathological staging of the breast carcinoma, presence or absence of nodes and presence or absence of other IHC parameters.
Results: We used ANOVA-F test to catagories variables and measure the test of significance. On IHC in Her-2 neu equivocal cases (patients who had two "++" positive points), we performed FISH test. Out of these 17 equivocal cases, only 3 were positive, 10 were negative and 4 patients did not underwent this test due to several reasons. Finally, Ki-67 value is significantly high in triple negative and Luminal-B patients. NPI is also having low 'P'value, although not reaching the level of significance.
Conclusion: Types of breast carcinoma, which look histologically similar behaves differently in their clinical presentation and in prognosis.In our study only Ki-67 was correlated with poor prognostic subtype of molecular classification but no any poor risk of clinical or histological parameter was correlated significantly with bad prognostic subtype of molecular classification as Luminal-B or triple negative type. We can say that this molecular classification is different in terms of prognosis in patients with similar looking clinical and histological parameters.

1. Introduction

Worldwide, breast cancer is by far the most common cancer amongst women, with an incidence rate more than twice that of colorectal cancer and cervical cancer and about three times that of lung cancer. However breast cancer mortality worldwide is just 25% greater than that of lung cancer in women (WHO, 2003).[1] In 2004, breast cancer caused 519,000 deaths worldwide (7% of cancer deaths; almost 1% of all deaths).[2] In India, for the year 2012, 144,937 women were newly detected with breast cancer and 70,218 women died of it. In India, for every 2 women newly diagnosed with breast cancer, one lady is dying of it. In comparison, in USA in the year 2012, incidence was 232,714 with 43,909 death and one death for 5-6 breast carcinoma patients and in China in year 2012, incidence was 187,213, with 47,984 death and one death for 4 breast carcinoma patients. Since

*Corresponding author.
E-mail address: g20mittal@gmail.com (G. S. Mittal).

https://doi.org/10.18231/j.jdpo.2020.006

S. No: 163

Title of the Collaborative activity: Clinical outcome and oncological safety of submental flap for reconstruction in head and neck cancer patients.

Name of the collaborator: 1. Himanshu Bhutani - ITS Dental College Greater Noida, Uttar Pradesh India, 2. Mudit Agarwal - Rajiv Gandhi Cancer Institute & Research Centre New Delhi India

Name of the participants: Gyanendra S. Mittal, Himanshu Bhutani, Abhishek Gautam, Mudit Agarwal

Year of collaboration: 2019-20

Nature of the activity: Research

Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology 2020 ;6(3):132–136

Content available at: https://www.ipinnovative.com/open-access-journals

Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology

Journal homepage: www.ipinnovative.com

Original Research Article

Clinical outcome and oncological safety of submental flap for reconstruction in head and neck cancer patients

Gyanendra S. Mittal[1,*], Himanshu Bhutani[2], Abhishek Gautam[1], Mudit Agarwal[3]

[1]*Dept. of Surgery, Santosh Medical College & Hospitals,, Ghaziabad, Uttar Pradesh, India*
[2]*ITS Dental College, Greater Noida, Uttar Pradesh, India*
[3]*Rajiv Gandhi Cancer Institute & Research Centre, New Delhi, India*

ARTICLE INFO

Article history:
Received 26-08-2020
Accepted 04-09-2020
Available online 03-10-2020

Keywords:
Submental flap
Carcinoma oral cavity
Composite resection
Intra oral reconstruction

ABSTRACT

Background: Submental flap is an axial pattern, myo-cutaneous flap based on submental artery (branch of facial artery). We have used this novel flap for reconstruction of the intra-oral, as well of the lower and mid face defects created after resection of certain intra-oral malignancies.
Materials and Methods: This study included 15 patients and done over a period of 3 years. Cases were operated by a team of surgical oncologists using the same technique and under 2.5 x magnifications (loupe). Any nodes in the region were carefully dissected and sent for frozen section for intra-operative verification of presence or absence of microscopic tumor deposits. Evaluation had been done based on the clinical and pathological staging, nodal status as well as the patient outcome.
Results: Out of the 15 patients who underwent reconstruction with submental flap, one patient developed total flap loss, whereas one patient had partial flap necrosis. The remaining 13 patients showed decent clinical outcome and the flap uptake was good. In the follow up period of 2 years, two patients developed regional recurrence (none in the flap donor or recipient sites) and 2 developed distant metastasis.
Conclusion: Submental flap is an excellent flap for reconstruction of small to medium size defects for intra-oral as well as lower and mid face. It is useful in medically compromised conditions, old age or low socio-economic status of the patient as these factors preclude the use of a free flap. It is oncologically safe for reconstruction and in the absence of clinical or radiological evidence of nodal disease in sub-mental region and may be considered for reconstruction in N0 as well as N1 patients.

1. Introduction

Oral cavity cancers are the sixth most common cancer worldwide and in India it is the second most cancer in males after lung carcinoma and comprises 30% of all head and neck cancers.[1] Most tumors of the oral cavity are squamous cell carcinomas (SCC), but other histological types such as minor salivary gland carcinomas, tumors arising from gingiva, lymphomas and melanomas may occur rarely. Presence of lymph node metastases is the most significant prognostic factor of adverse outcome in head and neck SCC.[2]

Surgery is the backbone for primary management of oral cavity cancers as radiotherapy and chemotherapy has reserved for adjuvant treatment in patients with high risk for loco-regional recurrence. Surgical excision of oral carcinoma usually creates a three dimensional defect. The reconstruction of such defect is a challenging task as it generates a significant impact on the quality of life in these patients.[3] Split thickness skin graft, loco-regional rotation or pedicle flap and free flap have been used for reconstruction of oral cavity defects. Free flaps such as the radial forearm or anterio-lateral thigh (ALT) flaps have become the first choice in the last two decades and are currently used with great success in the reconstruction of extensive intra-oral defects.[4] If part of the mandible has

*Corresponding author.
E-mail address: g20mittal@gmail.com (G. S. Mittal).

https://doi.org/10.18231/j.jooo.2020.029

S. No: 164

Title of the Collaborative activity: Antibacterial activity of Syzygium aromaticum (Clove) against uropathogens producing ESBL, MBL and Amp C beta lactamase: Are we close to getting a new antibacterial agent?

Name of the collaborator: 1. Amisha Sharma-Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Kumarhatti, Solan, Himachal Pradesh, India

Name of the participants: Sameer S Faujdar, Dakshina Bisht, Amisha Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 164

Antibacterial activity of *Syzygium aromaticum* (clove) against uropathogens producing ESBL, MBL, and AmpC beta-lactamase: Are we close to getting a new antibacterial agent?

Sameer S. Faujdar[1], Dakshina Bisht[1], Amisha Sharma[2]

[1]*Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh,* [2]*Department of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Kumarhatti, Solan, Himachal Pradesh, India*

Abstract

Introduction: The present study was done to access the antibacterial activity of clove (*Syzygium aromaticum*) against extended-spectrum beta-lactamase (ESBL), metallo-beta-lactamase (MBL), and AmpC beta-lactamase-producing gram-negative bacteria causing urinary tract infection. **Methods:** A total of 221 gram-negative uropathogens were isolated and screened for beta-lactamase (ESBL, MBL, and AmpC) production and further tested against ethanolic extract of clove (*S. aromaticum*) for its antibacterial activity. **Results:** Clove was effective against all gram-negative isolates but the best antibacterial activity was shown against *Proteus* species with 19 mm zone of inhibition, 0.39 mg/ml minimum inhibitory concentration (MIC) and 0.19 mg/ml minimum bactericidal concentration (MBC).**Conclusions:** Clove extract showed different antibacterial potential against all gram-negative uropathogens. Clove activity for particular strain was found to be similar between isolates producing beta-lactamase and non beta-lactamase.

Keywords: Extended-spectrum β-lactamases, metallo-beta-lactamase, and AmpC beta-lactamase, *Syzygium aromaticum* (clove), urinary tract infection, uropathogens

Introduction

There are many infectious diseases that occur during a lifetime. One of these is urinary tract infection (UTI), which is experienced by approximately 10% of population and in some cases can lead to morbidity in patients if not treated on time. UTI is caused by many different microorganisms (uropathogens) which include viruses, fungi, and bacteria but the major microorganism responsible for causing UTI in 95% cases is the bacteria.[1,2] Antibiotic resistance against these bacteria causing UTI has been reported by many authors from developed and developing countries. This rapid spread of resistance especially toward beta-lactam antibiotics is a global threat as it possesses a therapeutic challenge which is mediated by different beta-lactamases enzymes such as extended-spectrum beta-lactamase (ESBL), metallo-beta-lactamases (MBLs), and AmpC beta-lactamase. Therefore, it has led to limited choice of antibiotics due to the continuous emergence of these enzymes. Hence, it has become utmost important to find out new antibacterial agents.[3,4] Due to the emergence

Address for correspondence: Dr. Dakshina Bisht, Department of Microbiology, Santosh Medical College and Hospital, Ghaziabad, Uttar Pradesh - 201 009, India.
E-mail: dakshinabisht@gmail.com

Received: 18-10-2019 **Revised:** 06-12-2019
Accepted: 16-12-2019 **Published:** 28-01-2020

Access this article online
Quick Response Code:
Website: www.jfmpc.com
DOI: 10.4103/jfmpc.jfmpc_908_19

How to cite this article: Faujdar SS, Bisht D, Sharma A. Antibacterial activity of *Syzygium aromaticum* (clove) against uropathogens producing ESBL, MBL, and AmpC beta-lactamase: Are we close to getting a new antibacterial agent? J Family Med Prim Care 2020;9:180-6.

S. No: 165

Title of the Collaborative activity: Molecular Detection of Aspergillus in sputum of patients with lower respiratory tract infections

Name of the collaborator: 1. Shukla Das-Department of Microbiology, UCMS, GTBH, New Delhi, India, 2. Gargi Rai-Department of Microbiology, UCMS, GTBH, New Delhi, India

Name of the participants: Alosha Sharma, Dakshina Bisht, Shukla Das, Gargi Rai, Shyama Dutt, V K Arora

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

Molecular Detection of *Aspergillus* in Sputum of Patients with Lower Respiratory Tract Infections

Alosha Sharma, Dakshina Bisht, Shukla Das[1], Gargi Rai[1], Shyama Dutt[1], V K Arora[2]

Departments of Microbiology and [2]TB and Chest, Santosh Medical College, Ghaziabad, Uttar Pradesh, [1]Department of Microbiology, UCMS, GTBH, New Delhi, India

Abstract

Background: Raised incidences of respiratory tract infections due to fungal agents in immunocompetent individuals are a cause of concern due to the unavailability of rapid diagnostic methods. **Materials and Methods:** Sputum and serum samples were collected from patients having lower respiratory tract infections (LRTIs), serum samples were screened for the presence of anti *Aspergillus* antibodies and sputum samples were homogenized and processed for identification of *Aspergillus* by conventional methods and further subjected to polymerase chain reaction (PCR) using genus-specific ITS 4-5 primers. **Results:** PCR identified *Aspergillus* in 28% sputum samples, which was high as compared to conventional methods. **Conclusion:** Simple conventional PCR technique proves to be useful screening in for early identification of *Aspergillus* colonization in patients with LRTI, which can prevent irreversible damage in their lungs by fungal invasion.

Keywords: *Aspergillus flavus, Aspergillus fumigatus, lower respiratory tract infections, polymerase chain reaction*

Introduction

Respiratory tract infections are globally responsible for one-third of the infectious diseases of which, fungal agents remain largely unrecognized. Most commonly *Aspergillus*, *Candida,* and *Mucorales* and rarely *Fusarium*, *Scedosporium*, *Penicillium*, and *Basidiomycetes* have been reported to be responsible for invasive fungal infections.[1] Among these *Aspergillus* spores due to its ubiquitous distribution gets suspended in air and sediment in distal airways and alveolar spaces.[2]

Respiratory samples such as sputum samples are easy to obtain and do not require any invasive procedure. Sputum of lower respiratory tract infected patients is routinely not sent for fungal culture. Furthermore, culture isolation for invasive infection has a variable sensitivity from 5% to 75% and poor specificity hence, repeated isolation is needed for diagnosing invasive aspergillosis.[3]

Detection of *Aspergillus* spp., implementing molecular methods have been documented in immunocompromised individuals, but not in immunocompetent individuals.[4] As there are rising incidences of invasive pulmonary aspergillosis (IPA) in immunocompetent individuals without traditional risk factors, rapid diagnostic tests such as polymerase chain reaction (PCR) are warranted along with other conventional methods, for early diagnosis of invasion by *Aspergillus* spp.[5]

Sensitivity and specificity of PCR in bronchoalveolar lavage fluid have been estimated to be 67%–100% and 55%–95%, respectively.[5] Few studies conducted in India emphasize on *Aspergillus* isolation from patients with complaints of lower respiratory tract infection (LRTI). Hence, the present study was undertaken to assess the ability of PCR for *Aspergillus* DNA detection in a sputum sample of patients suffering from LRTI and to evaluate the sensitivity and specificity of PCR comparing it to conventional culture methods.

Materials and Methods

The study was conducted in the Department of Microbiology and TB-Chest Clinic of Santosh Medical College and Hospital Ghaziabad in collaboration with the Department of Microbiology, University College of Medical Sciences, GTB Hospital, New Delhi.

How to cite this article: Sharma A, Bisht D, Das S, Rai G, Dutt S, Arora VK. Molecular detection of *Aspergillus* in sputum of patients with lower respiratory tract infections. Int J App Basic Med Res 2020;10:86-90.

Submitted: 02-Nov-2018
Revised: 30-Mar-2019
Accepted: 13-Feb-2020
Published Online: 02-Apr-2020

Address for correspondence:
Dr. Dakshina Bisht, Department of Microbiology, Santosh Medical College, Ghaziabad, Uttar Pradesh, India.
E-mail: dakshinabisht@gmail.com

Access this article online

Website: www.ijabmr.org

DOI: 10.4103/ijabmr.IJABMR_364_18

Quick Response Code:

S. No: 166

Title of the Collaborative activity: Antimicrobial susceptibility pattern of gram negative bacilli isolated from delhi NCR population

Name of the collaborator: 1. Sameer Singh Faujdar-Dept. of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Solan, Himachal Pradesh, India

Name of the participants: K M Sangita, Dakshina Bisht, Sameer Singh Faujdar,Varun Goel

Year of collaboration: 2019-20

Nature of the activity: Research

Indian Journal of Microbiology Research 2020;7(3):218–221

Content available at: https://www.ipinnovative.com/open-access-journals

Indian Journal of Microbiology Research

Journal homepage: www.ipinnovative.com

Original Research Article

Antimicrobial susceptibility pattern of gram negative bacilli isolated from Delhi NCR population

K M Sangita[1], Dakshina Bisht[1,*], Sameer Singh Faujdar[2], Varun Goel[3]

[1]*Dept. of Microbiology, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, India*
[2]*Dept. of Microbiology, Maharishi Markandeshwar Medical College and Hospital, Solan, Himachal Pradesh, India*
[3]*Dept. of Microbiology, Government Institute of Medical Sciences, Greater Noida, Uttar Pradesh, India*

ARTICLE INFO

Article history:
Received 08.06.2020
Accepted 12.09.2020
Available online 28-10-2020

Keywords:
Antimicrobial
Metallo beta lactamase
Gram negative

ABSTRACT

Introduction: Antibiotic resistance is a worldwide public health problem that requires urgent global attention and Gram-negative bacilli of the *Enterobacteriaceae* family are well-known for demonstrating drug resistance. These drug resistance microorganisms cause recurrent infections in patients in hospital units, limiting treatment alternatives and increasing morbidity and mortality rates.
Material and Methods: A cross sectional study was carried out in the Department of Microbiology, Santosh Medical College and Hospital Ghaziabad. 150 Gram negative bacteria isolated from various clinical samples from both IPD and OPD patients were included in this study.
Results: Among the Gram negative bacterial isolates maximum isolates were identified as *E. coli* (50%), *Klebsiella species* (20%), *Citrobacter species* (12%), *Pseudomonas aeruginosa* (10%), *Acinetobacter species* (07%) and *Proteus species* (04%). *Enterobacteriacae isolate* were sensitive to Imipenem (82.2%), Gentamycin (55.5%), Cefepime (42.2%), and resistant to Ampicillin (85.9%), Ceftriaxone (82.9%) and Levofloxacin (62.9%).
Conclusion: Routine surveillance of baseline resistance, expressing of hospital antibiotic policy and compliance with current guidelines will go long way in reducing multi drug resistance among pathogens.

1. Introduction

Antimicrobial resistance is a growing problem in the 21*st* Century and one of the most serious problem to global public health.[1] The number of resistant microbial strains, geographic areas affected by drug resistance and the extent of resistance in each organism are escalating.[2] Moreover, the percentage of organisms exhibiting antimicrobial resistance, especially resistance to multiple antibiotics, are continuingly increased.[3] Resistant microorganisms lead to an increase in morbidity and mortality since it increases the risk of inappropriate therapy.[4,5] This resistance may delay and hinder treatment, resulting in complications or even death.[6,7] Moreover a patient may need more care, as well as the use of alternative and more expensive antibiotics which may have more severe side effects or may need invasive treatment such as intravenous injection to be given in hospital.[6,8]

Experiences from surveillance network on antimicrobial use and antimicrobial resistance show that data where ever available, can be put to multiple uses, including orienting treatment choice, understanding antimicrobial trend, informing public health policy, identifying priority areas for interventions and monitoring the impact of interventions to certain resistance.[1] Therefore, the present study involves the screening of the antimicrobial resistant profile of carbapenem drugs that are used in the treatment of infectious diseases.

* *Corresponding author.*
E-mail address: dakshinabisht@gmail.com (D. Bisht).

https://doi.org/10.18231/j.ijmr.2020.039

S. No: 167

Title of the Collaborative activity: Mupirocin resistance in coagulase negative staphylococcus isolated from rural population- an underestimated threat?

Name of the collaborator: 1. Sameer Singh Faujdar-Department of Microbiology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India

Name of the participants: Dinesh Kumar, Dakshina Bisht, Sameer Singh Faujdar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 167

Mupirocin Resistance in Coagulase Negative *Staphylococcus* Isolated from Rural Population - An Underestimated Threat?

Dinesh Kumar[1], Dakshina Bisht[2], Sameer Singh Faujdar[3]

[1, 2] Department of Microbiology, Santosh Medical College & Hospital, Ghaziabad Uttar Pradesh, India. [3]Department of Microbiology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India.

ABSTRACT

BACKGROUND

CoNS when exposed to repeated or prolonged treatment with mupirocin ointment, may become a reservoir of high-level resistance determinants and then pass on this resistance to *S. aureus*. CoNS usually tends to be reservoirs of antimicrobial resistance factors, hence they generally lead to recurrence of multi-drug resistance. Hence, it is imperative to identify and discriminate the strains of *S. aureus* and CoNS. We wanted to analyse mupirocin resistance in coagulase negative *Staphylococcus* isolated from a rural population.

METHODS

This study was performed in the Department of Microbiology, SMCH (Ghaziabad) among indoor as well as OPD patients of a tertiary care hospital. All coagulase negative *Staphylococcus* strains were taken from patient's clinical specimens visiting the OPD or from patients getting treatment from the hospital. CoNS were identified by standard biochemical tests. An inhibition zonal area < 21 mm was considered as resistant.

RESULTS

Mupirocin resistance was found to be 7 % in MRCoNS and 5 % in MSCoNS. MupRH and MupRL were 5 % and 7 % respectively. Only 5 (5 %) isolates showed MIC more than 512 µg / mL as described.

CONCLUSIONS

In case of emergence of mupirocin resistance, other decolonization options ought to be considered.

KEY WORDS

CoNS, Methicillin-Resistant, High-Level, Low-Level, Mupirocin Resistance

Corresponding Author:
Dr. Dakshina Bisht.
Department of Microbiology, Santosh Medical College & Hospital, Ghaziabad Uttar Pradesh, India.
E-mail: dakshinabisht@gmail.com

DOI: 10.14260/jemds/2020/668

How to Cite This Article:
Kumar D, Bisht D, Faujdar SS. Mupirocin resistance in coagulase negative staphylococcus isolated from rural population - an underestimated threat? J Evolution Med Dent Sci 2020;9(41):3050-3054, DOI: 10.14260/jemds/2020/668

Submission 22-06-2020,
Peer Review 06-09-2020,
Acceptance 12-09-2020,
Published 12-10-2020.

S. No: 168

Title of the Collaborative activity: Corelation between cervicothoraccic angle and neck pain in adults

Name of the collaborator: 1. Shivani Tiwari Dwivedi-Dr. Lal Path Labs, Ghaziabad, Uttar Pradesh, India, 2. Sonam-School of Medical Sciences & Research, Sharda University, Greater Noida, Uttar Pradesh, India

Name of the participants: Amit Dwivedi, Vikram dagar, Shivani Tiwari Diwedi , Sonam

Year of collaboration: 2019-20

Nature of the activity: Research

Santosh University Journal of Health Sciences 2020;6(1):55–58

Content available at: iponlinejournal.com

Santosh University Journal of Health Sciences

Journal homepage: www.ipinnovative.com

Original Research Article

Co-relation between cervicothoracic angle and neck pain in adults

Amit Dwivedi[1], Vikram Dagar[1,*], Shivani Tiwari Dwivedi[2], Sonam[3]

[1] *Dept. of Orthopedics, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, India*
[2] *Dr. Lal Path Labs, Ghaziabad, Uttar Pradesh, India*
[3] *School of Medical Sciences & Research, Sharda University, Greater Noida, Uttar Pradesh, India*

ARTICLE INFO

Article history:
Received 21-04-2020
Accepted 13-06-2020
Available online 31-07-2020

Keywords:
Neck pain
Cervical pain
Cervicothoracic junction
T1 Slope

ABSTRACT

Introduction: Neck pain is the fourth most common cause of disability after lower back pain, depression, and joint pain. Cervical sagittal balance is as crucial as pelvic sagittal alignment and is related to the concept of T1 alignment.

Materials and Methods: An observational cross sectional study was conducted on 235 Patients diagnosed as neck pain and treated at our institute between August 2017 to July 2019 with age between 20-80 years with neck pain complaints and on medication were included in this study. Pain and functional improvements were assessed using visual analogue scale (VAS) and neck disability index (NDI). Standing lateral view and standing swimmers lateral view of cervical spine radiographs were taken and studied for evaluating cervicothoracic parameters T1 slope and SVA (Saggital Vertical Axis) C2-7, following neck pain and compared with normal ranges. Variations of these criteria have been reported along with the scores of the questionnaire. Statistical analysis was carried out using the edition 21.0 of the Statistical Package for Social Sciences (SPSS).

Results: After analysis, it was found that the average T1 slope was 27.82 + 14.33, the average male T1 slope was 26.74 + 14.21 and the average female T1 slope was 28.56 + 14.42. According to Sang et al average T1 slope is 25.7.5 + 6.4 which was taken as a reference for comparison with the asymptomatic population, our study had an increased value but was not significant.

Conclusions: The pain in the neck increases with age. It is more prevalent in females. Study shows an increase in neck pain with increasing age due to degenerative changes in the T1 slope, SVA C2-C7. There is no significant correlation with cervical and neck pain or disability but a good relationship between the two. There was no substantial difference in cervical curve between symptomatic and asymptomatic patients.

1. Introduction

Neck pain is the fourth most common cause of disability after lower back pain, depression, and joint pain.[1] Simple conditions that are prone to accumulation such as mechanical stress, lack of muscle strength, office computer jobs, non-ergonomic working environments, and long working hours result in neck pain being more frequently seen in middle age.[2]

Cervical vertebral X-ray is the most common diagnostic tool used in this circumstance.[3,4] Cervical sagittal balance is as crucial as pelvic sagittal alignment and is related to the concept of T1 alignment.[5]

Due to a lack of clear consensus on the relationship between cervico-thoracic parameters and neck pain in the literature, we aimed to determine the various cervical thoracic junction parameters of our patients with radiographs due to better affordability. The present study was plan with aimed to examine whether the sagittal profile of the cervicothoracic spine shows any association with the presence and severity of neck pain in the adult population.

* *Corresponding author.*
E-mail address: dr.vikramdagar@gmail.com (V. Dagar).

https://doi.org/10.18231/j.sujhs.2020.013

S. No: 169

Title of the Collaborative activity: To Study the Relationship of Human Circadian Rhythm with Body Mass Index & Mini Mental State Examination

Name of the collaborator: 1. Anupama V. Betigeri - Reader, Department of Physiology, Manav Rachna Dental College, Faridabad, India, 2. Vithalkumar M. Betigeri - Professor, Department of CTVS, Govind Ballabh Pant Institute of Postgraduate Medical Education and Research, New Delhi **Name of the participants:** Anupama V. Betigeri, Rinku Garg, Vithalkumar M. Betigeri, Himanshu Thukral

Year of collaboration: 2019-20

Nature of the activity: Research

International Journal of Health Sciences and Research
Vol.10; Issue: 5; May 2020
Website: www.ijhsr.org
Original Research Article
ISSN: 2249-9571

To Study the Relationship of Human Circadian Rhythm with Body Mass Index & Mini Mental State Examination

Anupama V. Betigeri[1], Rinku Garg[2], Vithalkumar M. Betigeri[3], Himanshu Thukral[4]

[1]Reader, Department of Physiology, Manav Rachna Dental College, Faridabad, India
[2]Professor, [4]PhD Scholar,
Department of Physiology, Santosh Medical College & Hospitals, Santosh Deemed to be University Ghaziabad, India
[3]Professor, Department of CTVS, Govind Ballabh Pant Institute of Postgraduate Medical Education and Research, New Delhi

Corresponding Author: Himanshu Thukral

ABSTRACT

Background: There is individual difference of morningness-eveningness based on intrinsic biological rhythms of a person. Many studies shows a relationship between measures of morningness - eveningness preference (MEQ) score with mini-mental state examination (MMSE) & body mass index (BMI). Our study explores the relationship of these factors to grading the cognitive state of undergraduate dental students.
Method: A total of 49 individuals provided with morning-evening questionnaire (MEQ) for the information on circadian rhythm. Their cognitive ability was assessed using mini mental state examination questionnaire (MMSE). Shapiro-Wilk test and Wilcoxon test were applied using R software (v.3.2.2). P value was considered to be significant at ($p<0.05$).
Results: On the basis of analysis, the students were divided into evening type and morning type. Cognitive assessment of both morning type and evening types shows significant difference between them with evening type have significantly lower MMSE score. Also evening type participants were having higher BMI than morning types.
Conclusion: In this study it seen that evening chronotype participants are more obese with low cognitive score in comparison to morning chronotype participants.

Keywords: Cognition, circadian rhythm, chronotype

INTRODUCTION

Circadian rhythm is a 24 hour internal physiological cycle that regulates physical, mental and behavioural changes. Although it can be modulated with the external environment such as sunlight-moonlight and temperature. [1,2] It is clearly evident that activities in the brain, enzyme-hormonal balance, cells regulation and many other biological activities are related to circadian clock. If there is any disturbance in harmonization between environments externally and internally, we may experience serious health consequences which further damages body and leads us to increased risk for various diseases.

Morning-Evening pattern of circadian rhythm in humans or their chronotype patterns are predicting markers for various factors affecting life of individuals whether it is related to health, academics or emotions. Morning individuals are those who wake up early in the morning, fresh, highly active and healthy generally known as lark "a morning bird". [3] Evening type are those who have difficulty in waking

S. No: 170

Title of the Collaborative activity: Anthropometric Correlation with Pathophysiology of Obstructive Sleep Apnea (OSA): A Review

Name of the collaborator: 1. Gaurav Gupta, 2. Sanjeev Sinha - Department of Medicine, All India Institute of Medical Sciences (AIIMS), Room No. 3094, New Delhi, India

Name of the participants: Himanshu Thukral ,Gaurav Gupta ·,Sanjeev Sinha, Rinku Garg

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 170

Review | Published: 29 May 2020

Anthropometric Correlation with Pathophysiology of Obstructive Sleep Apnea (OSA): A Review

Himanshu Thukral, Gaurav Gupta ✉, Sanjeev Sinha & Rinku Garg

Sleep and Vigilance **4**, 95–103 (2020) | Cite this article

Abstract

Obstructive sleep apnoea syndrome (OSAS) is a type of breathing disorder with upper airway obstruction, leading to oxy-haemoglobin desaturations and sleep disturbance. However awareness regarding various anthropometric parameters used to analyse OSA syndrome pre-clinically is inadequate. In developing nations, like India, resources are not adequate for analysis of sleep disturbances. That is why the prevalence and validity of various anthropometric parameters including neck circumference, Body mass index and waist circumference to be established and verified regularly. We have also seen the data from oral aspect and its anomalies. Various articles from Pubmed, scopus, google scholar were searched for data. These body measurements may provide pre-clinical aspect of OSA, whether it is present or not. Discussion was done on these anthropometric parameters and which parameter is gold standard for the pre-clinical investigations.

References

1. Punjabi NM. The epidemiology of adult obstructive sleep apnea. Proc Am Thoracic Soc. 2008;5:136–43. https://doi.org/10.1513/pats.200709-155MG.

Article Google Scholar

Review | Published: 29 May 2020

Anthropometric Correlation with Pathophysiology of Obstructive Sleep Apnea (OSA): A Review

Himanshu Thukral, Gaurav Gupta ✉, Sanjeev Sinha & Rinku Garg

Sleep and Vigilance **4**, 95–103 (2020) | Cite this article

108 Accesses | **2** Citations | Metrics

Abstract

Obstructive sleep apnoea syndrome (OSAS) is a obstruction, leading to oxy-haemoglobin desaturations and sleep disturbance. However awareness regarding various anthropometric parameters used to analyse OSA syndrome pre-clinically is inadequate. In developing nations, like India, resources are not adequate for analysis of sleep disturbances. That is why the prevalence and validity of various anthropometric parameters including neck circumference, Body mass index and waist circumference to be established and verified regularly. We have also seen the data from oral aspect and its anomalies. Various articles from Pubmed, scopus, google scholar were searched for data. These body measurements may provide pre-clinical aspect of OSA, whether it is present or not. Discussion was done on these anthropometric parameters and which parameter is gold standard for the pre-clinical investigations.

This is a preview of subscription content, access via your institution.

References

1. Punjabi NM. The epidemiology of adult obstructive sleep apnea. Proc Am Thoracic Soc. 2008;5:136–43. https://doi.org/10.1513/pats.200709-155MG.

Article Google Scholar

Rinku Garg

Department of Physiology, Santosh Medical College and Hospitals (SMC&H), Santosh Deemed To Be University, Uttar Pradesh, Ghaziabad, India

View author publications

You can also search for this author in PubMed | Google Scholar

Access via your institution →

Access options

Rent this article via DeepDyve.

Learn more about Institutional subscriptions

Sections | Figures | References

Abstract
References
Funding
Author information
Ethics declarations
Additional information
Rights and permissions
About this article

S. No: 171

Title of the Collaborative activity: A comparative study to assess the efficacy of permethrin (Topical) and ivermectin (oral) in scabies patients seeking care at a tertiary care teaching hospital of Northern India

Name of the collaborator: 1. Praveen Agarwal Department of Pharmacology, FH Medical College, Tundla, Uttar Pradesh, India, 2. Sonam Sharda Department of Pharmacology, FH Medical College, Tundla, Uttar Pradesh, India

Name of the participants: Chitti Babu, G., Bagati, K.D., Agarwal, P., Sharda, S

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation

Journal Home Page: www.ijrps.com

A comparative study to assess the efficacy of permethrin (topical) and ivermectin (oral) in scabies patients seeking care at a tertiary care teaching hospital of northern India

Chitti Babu G[1], Kavita Dhar Bagati[*2], Praveen Agarwal[3], Sonam Sharda[3]

[1]Department of Pharmacology, Santosh University, Ghaziabad, NCR-Delhi,India
[2]Department of Pharmacology, Santhosh Medical College, Ghaziabad, NCR-Delhi,India
[3]Department of Pharmacology, FH Medical College, Tundla, Uttar Pradesh,India

Article History:

Received on: 08.07.2019
Revised on: 14.10.2019
Accepted on: 22.10.2019

Keywords:

Therapeutic intervention, improvement, scabies clinical grade, scabies itching grade

ABSTRACT

The evidence for the superiority of Ivermectin (Oral) over topical preparations in the treatment of scabies conclusively lacks at present. Randomized controlled trials comparing ivermectin with topical permethrin have provided us the inconclusive results.To comparatively assess the efficacy of permethrin (topical) and ivermectin (oral) in scabies patients.After enrolling 178 study subjects, they were equally distributed to two study groups (I & II) and were given the desired respective therapeutic medication or interventions. Subjects in Group I was given permethrin 5% cream, and subjects in Group B were given a single dose of tablet ivermectin orally (200 mcg/kg). Efficacy of two groups of drugs was compared in terms of improvement in clinical grading of disease (%) & development in clinical grading of pruritus (%) during follow up visits at the end of 1, 2, 4 & 6 weeks.The mean age (± SD) for study subjects in Group I was 18.18 ± 11.33 years, whereas, in the Group II, it was 25.185 ± 10.67 years. The clinically observed cure rate among two groups i.e., Permethrin and Ivermectin at the end of the first and second weeks were 72% and 40%, and 96% and 58%, respectively. Rapid improvement in itching was noted down among subjects receiving topical permethrin as compared to those who received oral ivermectin. Comparatively, during different visits, permethrin provided better and fast improvement in itching grade than ivermectin.The improvement in scabies clinical grade and itching grade for permethrin (topical) was found to be more efficacious in comparison to ivermectin (oral).

*Corresponding Author

Name: Kavita Dhar Bagati
Phone:
Email: dhar.kavita12@gmail.com

ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v11i1.1950

Production and Hosted by

IJRPS | www.ijrps.com

INTRODUCTION

"Scabies" is a parasitic infection which is very frequently observed and is caused by an obligate human parasitic mite, i.e., "Sarcoptes scabiei var. hominis". Global incidence per year for the scabies cases is more than three hundred million (Abedin *et al.*, 2007). Poor hygiene, overcrowding, undernutrition are well-established risk factors for scabies (Campbell, 1993). Especially in developing nations, scabies, and related impetigo are significant associated risk factors for the development of chronic renal disorders (Chosidow, 2006). Several attempts have been made to find anti-scabies drugs

S. No: 172

Title of the Collaborative activity: Assessment of psycho-emotional distress due to age, body mass index, and marital status in polycystic ovary syndrome in North Indian population

Name of the collaborator: 1. Hemali Heidi Sinha Department of Gynecology and Obstetrics, All India Institute of Medical Sciences, Patna (Bihar)- 801507, India, 2. Md Sayeed Akhtar College of Pharmacy, King Khalid University, Abha-21974, Kingdom of Saudi Arabia

Name of the participants: Tabassum, F., Sinha, H.H., Dhar, K., Jyoti, C., Akhtar, M.S., Chopra, V.S.

Year of collaboration: 2019-20

Nature of the activity: Research

http://www.ijwhr.net

doi 10.15296/ijwhr.2020.59

Open Access Original Article

IJWHR

International Journal of Women's Health and Reproduction Sciences
Vol. 8, No. 4, October 2020, 368–375
ISSN 2330-4456

Assessment of Psycho-emotional Distress Due to Age, Body Mass Index, and Marital Status in Polycystic Ovary Syndrome in North Indian Population

Fauzia Tabassum[1*], Hemali Heidi Sinha[2], Kavita Dhar[1], Chandra Jyoti[2], Md Sayeed Akhtar[3], Vipender Singh Chopra[1]

Abstract

Objectives: Polycystic ovary syndrome (PCOS) is a multifaceted endocrine disorder in reproductive age having a greater impact on health-related quality of life (HRQOL).

The aim of this study was to find out PCOS demographics and its related HRQOL effects for improving psychological understanding in disease management.

Materials and Methods: A prospective questionnaire-based study was conducted for a period of twelve months at All India Institute of Medical Sciences, Patna, India. The data of 100 PCOS cases were collected about socio-demographic status, clinical history, and dietary intake. Then, a validated PCOS questionnaire (PCOSQ) was used to observe the impact of PCOS symptoms on patients' HRQOL.

Results: The overall 57% and 48% of PCOS cases belonged to the age range of 20-30 years and had a body mass index (BMI) of >25-30, respectively. Based on the results, a significant difference was observed in the mean score of PCOSQ vs. marital status in PCOS cases with respect to emotion ($P=0.039$), body weight ($P=0.002$), and infertility ($P=0.001$). Furthermore, the result showed a significant difference in the domain of emotion ($P=0.008$), body hair ($P=0.035$), body weight ($P<0.001$), and infertility ($P=0.018$) among BMI group, and a high score was observed in the BMI group <18 in comparison to the other groups of BMI.

Conclusions: In general, our findings indicated that infertility, emotions, and BMI had extremely higher impacts on the HRQOL of women suffering from PCOS although their educational status failed to affect HRQOL.

Keywords: PCOS, HRQOL, Infertility, Emotion, BMI, Economic status

Introduction

According to the World Health Organization (WHO), polycystic ovary syndrome (PCOS) affected 116 million (3.4%) women worldwide in 2012 (1) and the centre for disease control and prevention reported the most common causes of female infertility among US women at reproductive age. It comprises around 6 to 12% (around 5 million) populations (2). In addition, PCOS has been reportedly high among Indian women similar to their Caucasian counterparts, with an estimated prevalence of around 9.13%-22.5% in Indian adolescents. So far, no proper published statistical data are available on the prevalence of PCOS in India (3,4). Thus, PCOS is the major endocrine disorder among women in reproductive age suffering from anovulation or oligoovulation and hyperandrogenism without any other underlying condition (5). The major risk factors in PCOS women are the increased risk of psychological and reproductive problems including depression, anxiety, suicidal thoughts, infertility, endometrial cancer, and gestational problems (6-8). On the other hand, PCOS cases may cause psychological morbidity and have a significant negative impact on health-related quality of life (HRQOL) in women at reproductive age (9). PCOS cases have a greater predisposition to obesity and more adversely affect the HRQOL mainly due to infertility consequences (10). The level of hyperandrogenism and its related clinical symptoms seriously overweigh against performing daily work, as well as social activities and affecting HRQOL in young patients (11).

Currently, the due importance is given for understanding the effect of PCOS symptoms and treatment for HRQOL in PCOS cases. The variability of PCOS symptoms makes it important to understand the QOL from each patient's prospects. Furthermore, novel treatments and therapies can then be targeted toward improving psychosocial problems, which are most important for the concerned individual (12).

Received 6 December 2019, **Accepted** 24 March 2020, **Available online** 5 October 2020

[1]Department of Pharmacology, Santosh Medical College, Santosh University, Uttar Pradesh-201009, India. [2]Department of Gynecology and Obstetrics, All India Institute of Medical Sciences, Patna (Bihar)- 801507, India. [3]College of Pharmacy, King Khalid University, Abha–21974, Kingdom of Saudi Arabia.

***Corresponding Author:** Fauzia Tabassum, Tel: +966556180905, Email: fauzia.aiims@gmail.com

S. No: 173

Title of the Collaborative activity: Studies of liver for sulci , fissures and lobes with special emphasis on Rouvier sulcus in cadeveric specimen of liver as well as seen during laparoscopic cholecystectomy

Name of the collaborator: Department of Anatomy institute of Medical Science Saraswathi Institute of Medical Science Hapur-245101

Name of the participants: Ruchi Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 173

SANTOSH Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

SARASWATHI INSTITUTE OF MEDICAL SCIENCES
SIMS Our moto "Service to Mankind is Service to God"

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of Saraswathi Institute of Medical Sciences, Hapur, Utter Pradesh Collaborates for Research as per following details:

Tittle of Research: **"Studies of liver for accessory sulci, fissures, and lobes with special emphasis on Rouvier's sulcus in cadaveric specimens of liver as well as seen during laparoscopic cholecystectomy"**

Name of Primary Researcher: Ruchi Sharma

Research Location: **Santosh University (Ghaziabad) & Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh**

Co-guide/Mentor Allocated: Dr. Renu Mishra
Ex Professor & HoD
Dept. of Anatomy, Saraswathi Institute of Medical Sciences

Duration of Project: from ..... March 2019.....to..... March 2022.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 174

Title of the Collaborative activity: Effect of arginine as an adjuvant drug used along with the first line drugs in active tuberculosis

Name of the collaborator: Department of Pharmacology , Krishna mohan Medical Collage & Hospital, Pali Dungra, Sonkh Road, Mathura, UP-281123

Name of the participants: Kumar Raja Madasu

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 174

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of **Krishna Mohan Medical College and Hospital, Mathura, Uttar Pradesh 281123**. Collaborates for Research as per following details:

Title of Research: ***"Effect of arginine as an adjuvant drug used along with first line drugs in active tuberculosis"***

Name of Primary Researcher : Kumar Raja Madasu

Co-Researcher (if any) : NA

Research Location :Santosh University (Ghaziabad)/ Krishna Mohan Medical College and hospital,Mathura.

Co-guide/Mentor Allocated : **Dr.Hemantt Dutt**

Designation & Address of Co-guide/Mentor: Associate Professor, Krishna Mohan Medical College & Hospital, Mathura.

Duration of Project : From 2019 To 2022

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Jyoti Batia
Dean Research

Name and Signature of HOD/Principal/Dean-
Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Dutt
09/08/21
(Dr.Hemantt Dutt)
Head of Department
Department of Pharmacology
K.M. Medical College & Hospital
Mathura

Name and Signature of [illegible]
Krishna Mohan Medical College & Hospital,
Pali Dungra, Sonkh Road,
Mathura, Uttar Pradesh 281123

S. No: 175

Title of the Collaborative activity: A study to evaluate the drug utilization pattern of antimicrobials in in-patients and out patients in pediatric department in a teritary care teaching hospital

Name of the collaborator: A study to evaluate the drug utilization pattern of antimicrobials in in-patients and out patients in pediatric department in a teritary care teaching hospital

Name of the participants: Mohd. Shadab

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 175

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

VARUN ARJUN MEDICAL COLLEGE & ROHILKHAND HOSPITAL
VAMRCH
SHAHJAHANPUR
Excellence towards profession

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of Varun Arjun Medical College and Rohilkhand Hospital NH 24, Banthra Shahjahanpur (UP). Collaborates for Research as per following details:

Tittle of Research: **"A Study to Evaluate the Drug Utilization Pattern of Antimicrobials in In-Patient and out Patient in Paediatric Department of a Tertiary Care Teaching Hospital"**

Name of Primary Researcher: Mohd. Shadab

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad) & Varun Arjun Medical College and Rohilkhand Hospital NH 24, Banthra (Shahjahanpur)**

Co-guide/Mentor Allocated: Dr. Dharmender Gupta

Designation & Address of Co-guide/Mentor: Professor of Pharmacology
VAMC & RH, Banthra Shahjahanpur
UP

Duration of Project: from .....November 2019.....to.....2022.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Dr. DHARMENDER GUPTA

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

Varun Arjun Medical College
Shahjahanpur (U.P.)

S. No: 176

Title of the Collaborative activity: A clinical study to evaluate comparative efficacy & safety of Aflapin & diacerein in treatment of knee osteoarthritis

Name of the collaborator: Department of Orthopaedics, GS Medical Collage Pilkhuwa , UP-245304

Name of the participants: Mukesh Kumar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 176

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

Celebrating 25+ Impactful years Since 1990

GS MEDICAL COLLEGE & HOSPITAL
KNOWLEDGE • RESEARCH • HEALTHCARE
nurturing health building scholars

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of G S Medical College Pilkhuwa, Uttar Pradesh 245304 Collaborates for Research as per following details:

Tittle of Research: **"Comparative Study Of Aflapin-A bovel Boswellia Serrata Extract And Diacerein In Treatment Of Knee Osteoarthrills"**

Name of Primary Researcher: Mukesh Kumar

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad) & GS Medical College, Pilkhuwa, UP.**

Co-guide/Mentor Allocated: **Dr Kuldeep Kumar Gogia**

Designation & Address of Co-guide/Mentor: Associate Professor Department of Orthopaedics, GS Medical College Pilkhuwa, Uttar Pradesh.

Duration of Project: from .....Oct 2019.....to.....Oct 2021.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Head of Department
Department of Orthopaedics
G S. Medical College
Pilkhuwa U.P.

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 177

Title of the Collaborative activity: The effect of short message (SMS) reminders on adherence with intravenous iron sucrose (IVIS) during pregnancy in primary care setting of district NUH (Haryana)

Name of the collaborator: The effect of short message (SMS) reminders on adherence with intravenous iron sucrose (IVIS) during pregnancy in primary care setting of district NUH (Haryana)

Name of the participants: Dr Abhishek

Year of collaboration: 2019-20

Nature of the activity: Research

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of SHKM Government Medical College, Mewat Collaborates for Research as per following details:

Title of Research: The effect of short message service (SMS) reminders on adherence with intravenous iron sucrose (IVIS) during pregnancy in primary care setting of district Nuh (Haryana)

Name of Primary Researcher: Dr. Abhishek Singh

Co-Researcher (if any):

Research Location: Santosh University (Ghaziabad)/ SHKM Government Medical College, Mewat

Co-guide/Mentor Allocated: 1. Dr. Deepika Agrawal
2. Dr. Pawan Kumar Goel

Designation & Address of Co-guide/Mentor:

1. Professor and Head, Dept of Community Medicine, Santosh Medical College, Ghaziabad
2. Professor, Dept of Community Medicine, SHKM Government Medical College, Mewat cum Director, SHKM Government Medical College, Mewat

Duration of Project: from 2019 to 2022

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Jyoti Ratia
Dean Research

Name and Signature of HOD/Principal/Dean-
Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

09/08/2021

(Dr. Neeraj Gaur)
Professor & Head
Dept. of Community Medicine
SHKM Government Medical
College, Nalhar, Nuh
Collaborating Institute

S. No: 178

Title of the Collaborative activity: Drug utilization study among patients visiting out patient department of obstetrics & gynaecology in a tertiary care teaching hospital

Name of the collaborator: Department of Pharmacology, NCR Institute of Medical Science Meerut-250406

Name of the participants: Kapil Dev

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 179

SANTOSH Deemed to be University (Established u/s 3 of the UGC Act, 1956)

NCR INSTITUTE OF MEDICAL SCIENCES, MEERUT

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of NCR Institute of Medical Sciences, Meerut, collaborates for Research as per following details:

Till of Research: DRUG UTILIZATION STUDY AMONG PATIENTS VISITING OUT PATIENT DEPARTMENT OF OBSTETRICS & GYNAECOLOGY IN A TERTIARY CARE TEACHING HOSPITAL.

Name of Primary Researcher: KAPIL DEV SAGAR

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad)/ NCR Institute of Medical Sciences Meerut.**

Co-guide/Mentor Allocated: **Dr. Saurabh Kansal**

Designation & Address of Co-guide/Mentor: Prof & Head Pharmacology
NCR Institute of Medical Sciences Meerut.

Duration of Project: from ..... **April – 2019** ..... **to** ..... **December – 2021** .....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

10/08/2021

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 179

Title of the Collaborative activity: Studies of liver for sulci , fissures and lobes with special emphasis on Rouvier sulcus in cadeveric specimen of liver as well as seen during laparoscopic cholecystectomy

Name of the collaborator: Department of Anatomy institute of Medical Science Saraswathi Institute of Medical Science Hapur-245101

Name of the participants: Ruchi Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

SANTOSH Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

SARASWATHI INSTITUTE OF MEDICAL SCIENCES
SIMS Our moto "Service to Mankind is Service to God"

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of Saraswathi Institute of Medical Sciences, Hapur, Utter Pradesh Collaborates for Research as per following details:

Tittle of Research: "**Studies of liver for accessory sulci, fissures, and lobes with special emphasis on Rouvier's sulcus in cadaveric specimens of liver as well as seen during laparoscopic cholecystectomy"**

Name of Primary Researcher: Ruchi Sharma

Research Location: **Santosh University (Ghaziabad) & Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh**

Co-guide/Mentor Allocated: Dr. Renu Mishra
Ex Professor & HoD
Dept. of Anatomy, Saraswathi Institute of Medical Sciences

Duration of Project: from ..... March 2019.....to..... March 2022.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

Dr. Ashok Garg
(Prof. & HOD)
Professor & Head
Department of Anatomy
SIMS, HAPUR (U.P.)

S. No: 180

Title of the Collaborative activity: Study of Virulence Factors and Molecular Characterization of Multi Drug Resistant Pseudomonas Aeruginosa from Intensive Care Unit

Name of the collaborator: Department of Microbiology, Hind Intitute of Medical Science Mau, Ataria, Silapur-261303, (u.P), India

Name of the participants: Shivendra Shukla

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 180

SANTOSH
Deemed To Be University

H.I.M.S

This is hereby agreed with Santosh Deemed to be University (Ghaziabad) through respective authorized signatories that this HEI collaborates for Doctoral Research as per following details:

Title of Research: Study of virulence factors and molecular characterization of multi drug resistant *Pseudomonas aeruginosa* from Intensive Care Unit.

Name of Primary Researcher: Mr Shivendra Dutt Shukla

Designation in HEI: Tutor

Co-Researcher (if any):

Research Location: Santosh Deemed to be University, Ghaziabad, Uttar-Pradesh.

Mentor Allocated: Dr Razia Khatoon, Professor, Department of Microbiology, Hind Institute of Medical Sciences, Mau, Ataria, Sitapur – 261303, (U.P.), INDIA.

Mentor Affiliation: Hind Institute of Medical Sciences, Mau, Ataria, Sitapur-261303, U.P, India.

Duration of Project: January 2019 to October 2021.

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

Razia

Name and Signature of HOD/Principal/Dean-
Hind Institute of Medical Sciences
Mau, Ataria, Sitapur

For Santosh Deemed to be University
Jyoti Batra
Dean Research

S. No: 181

Title of the Collaborative activity: Lixisenatide induced congenital morphological malformation and histopathological changes in liver, kidney, stomach and cerrebral cortex on developing chick embryo

Name of the collaborator: Department of Pharmacology , F H Medical Collage, Elmadpur Agra(UP)- 282001

Name of the participants: Amit Kumar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 181

SANTOSH UNIVERSITY
(Established u/s 3 of the UGC Act, 1956)

FHMC

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of **Santosh Medical College & Hospital, Santosh Deemed to be University /F. H. Medical College Etmadpur, Agra**

Collaborates for Research as per following details:

Title of Research: **Lixisenatide induced congenital morphological malformation and histopathological changes in liver, kidney, stomach and cerrebral cortex on developing chick embryo**

Name of Primary Researcher: **Amit Kumar**

Co-Researcher (if any):

Research Location: Santosh University (Ghaziabad)/ **F. H. MEDICAL COLLEGE ETMADPUR, AGRA**

Designation & Address of Co-guide/Mentor**: Department of Pharmacology , F H Medical Collage, Elmadpur Agra(UP)- 282001**

Duration of Project: from...2019 to 2020

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 182

Title of the Collaborative activity: Effect of arginine as an adjuvant drug used along with the first line drugs in active tuberculosis

Name of the collaborator: Department of Pharmacology , Krishna mohan Medical Collage & Hospital, Pali Dungra, Sonkh Road, Mathura, UP-281123

Name of the participants: Kumar Raja Madasu

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 182

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of **Krishna Mohan Medical College and Hospital, Mathura, Uttar Pradesh 281123.** Collaborates for Research as per following details:

Title of Research: ***"Effect of arginine as an adjuvant drug used along with first line drugs in active tuberculosis"***

Name of Primary Researcher : Kumar Raja Madasu

Co-Researcher (if any) : NA

Research Location :Santosh University (Ghaziabad)/ Krishna Mohan Medical College and hospital,Mathura.

Co-guide/Mentor Allocated : **Dr.Hemantt Dutt**

Designation & Address of Co-guide/Mentor: Associate Professor, Krishna Mohan Medical College & Hospital, Mathura.

Duration of Project : From 2019 To 2022

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Jyoti Batia
Dean Research

Name and Signature of HOD/Principal/Dean-
Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Dutt
09/08/21
(Dr.Hemantt Dutt)
Head of Department
Department of Pharmacology
K.M. Medical College & Hospital
Mathura

Name and Signature of [illegible]
Krishna Mohan Medical College & Hospital,
Pali Dungra, Sonkh Road,
Mathura, Uttar Pradesh 281123

S. No: 183

Title of the Collaborative activity: A study to evaluate the drug utilization pattern of antimicrobials in in-patients and out patients in pediatric department in a teritary care teaching hospital

Name of the collaborator: Department of Pharmacology ,VAMC & RH, Banthra Shahjahanpur UP- 242401

Name of the participants: Mohd. Shadab

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 183

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

VARUN ARJUN MEDICAL COLLEGE & ROHILKHAND HOSPITAL
VAMRCH
SHAHJAHANPUR
Excellence towards profession

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of Varun Arjun Medical College and Rohilkhand Hospital NH 24, Banthra Shahjahanpur (UP). Collaborates for Research as per following details:

Tittle of Research: "A Study to Evaluate the Drug Utilization Pattern of Antimicrobials in In-Patient and out Patient in Paediatric Department of a Tertiary Care Teaching Hospital"

Name of Primary Researcher: Mohd. Shadab

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad) & Varun Arjun Medical College and Rohilkhand Hospital NH 24, Banthra (Shahjahanpur)**

Co-guide/Mentor Allocated: Dr. Dharmender Gupta

Designation & Address of Co-guide/Mentor: Professor of Pharmacology
VAMC & RH, Banthra Shahjahanpur
UP

Duration of Project: from .....November 2019.....to.....2022.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of
HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Dr. DHARMENDER GUPTA

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

Head of Department
Pharmacology
Varun Arjun Medical College
Shahjahanpur (U.P.)

S. No: 184

Title of the Collaborative activity: A clinical study to evaluate comparative efficacy & safety of Aflapin & diacerein in treatment of knee osteoarthritis.

Name of the collaborator: Department of Orthopedics, GS Medical Collage Pilkhuwa , UP-245304

Name of the participants: Mukesh Kumar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 184

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

Celebrating 25+ Impactful years Since 1990

GS MEDICAL COLLEGE & HOSPITAL
KNOWLEDGE • RESEARCH • HEALTHCARE
nurturing health building scholars

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of G S Medical College Pilkhuwa, Uttar Pradesh 245304 Collaborates for Research as per following details:

Tittle of Research: **"Comparative Study Of Aflapin-A bovel Boswellia Serrata Extract And Diacerein In Treatment Of Knee Osteoarthrills"**

Name of Primary Researcher: Mukesh Kumar

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad) & GS Medical College, Pilkhuwa, UP.**

Co-guide/Mentor Allocated: **Dr Kuldeep Kumar Gogia**

Designation & Address of Co-guide/Mentor: Associate Professor Department of Orthopaedics, GS Medical College Pilkhuwa, Uttar Pradesh.

Duration of Project: from .....Oct 2019.....to.....Oct 2021.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Head of Department
Department of Orthopaedics
G S. Medical College

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 185

Title of the Collaborative activity: The effect of short message (SMS) reminders on adherence with intravenous iron sucrose (IVIS) during pregnancy in primary care setting of district Nuh (Haryana)

Name of the collaborator: Department of Community Medicine, SHKM Government Medical Collage, Mewat-122508

Name of the participants: Dr Abhishek

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 185

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of SHKM Government Medical College, Mewat Collaborates for Research as per following details:

Title of Research: The effect of short message service (SMS) reminders on adherence with intravenous iron sucrose (IVIS) during pregnancy in primary care setting of district Nuh (Haryana)

Name of Primary Researcher: Dr. Abhishek Singh

Co-Researcher (if any):

Research Location: Santosh University (Ghaziabad)/ SHKM Government Medical College, Mewat

Co-guide/Mentor Allocated: 1. Dr. Deepika Agrawal
2. Dr. Pawan Kumar Goel

Designation & Address of Co-guide/Mentor:

1. Professor and Head, Dept of Community Medicine, Santosh Medical College, Ghaziabad
2. Professor, Dept of Community Medicine, SHKM Government Medical College, Mewat cum Director, SHKM Government Medical College, Mewat

Duration of Project: from 2019 to 2022

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Jyoti Batra
Dean Research
Name and Signature of HOD/Principal/Dean-
Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

09/08/2021
(Dr. Neeraj Gaur)
Professor & Head
Dept. of Community Medicine
SHKM Government Medical
College, Nalhar, Nuh
Collaborating Institute

S. No: 186

Title of the Collaborative activity: Drug utilization study among patients visiting out patient department of obstetrics & gynaecology in a tertiary care teaching hospital

Name of the collaborator: Department of Pharmacology, NCR Institute of Medical Science Meerut-250406

Name of the participants: Kapil Dev

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 186

SANTOSH Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

NCR INSTITUTE OF MEDICAL SCIENCES, MEERUT

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of **NCR Institute of Medical Sciences, Meerut,** collaborates for Research as per following details:

Tittle of Research: **DRUG UTILIZATION STUDY AMONG PATIENTS VISITING OUT PATIENT DEPARTMENT OF OBSTETRICS & GYNAECOLOGY IN A TERTIARY CARE TEACHING HOSPITAL.**

Name of Primary Researcher: KAPIL DEV SAGAR

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad)/ NCR Institute of Medical Sciences Meerut.**

Co-guide/Mentor Allocated: **Dr. Saurabh Kansal**

Designation & Address of Co-guide/Mentor: Prof & Head Pharmacology
NCR Institute of Medical
Sciences Meerut.

Duration of Project: from .....April-2019.....to..... December - 2021.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

10/08/2021

Name and Signature of
HOD/Principal/Dean
(Collaborating Institute)

S. No: 187

Title of the Collaborative activity: Studies of liver for accessory sulci, fissures, and lobes with special emphasis on Rouviers sulcus in cadaveric specimens of liver as well as seen during laparoscopic cholecytectomy

Name of the collaborator: Department of Microbiology, Hind Institute of Medical Science Mau, Ataria, Silapur-261303, (U.P), India,

Name of the participants: Shivendra Shukla

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 187

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

SARASWATHI
INSTITUTE OF MEDICAL SCIENCES
SIMS Our moto "Service to Mankind is Service to God"

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of Saraswathi Institute of Medical Sciences, Hapur, Utter Pradesh Collaborates for Research as per following details:

Till of Research: **"Studies of liver for accessory sulci, fissures, and lobes with special emphasis on Rouvier's sulcus in cadaveric specimens of liver as well as seen during laparoscopic cholecystectomy"**

Name of Primary Researcher: Ruchi Sharma

Research Location: **Santosh University (Ghaziabad) & Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh**

Co-guide/Mentor Allocated: Dr. Renu Mishra
Ex Professor & HoD
Dept. of Anatomy, Saraswathi Institute of Medical Sciences

Duration of Project: from ..... March 2019.....to..... March 2022.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Name and Signature of
HOD/Principal/Dean
Collaborating Institute

Dr. Ashok Garg
(Prof & HOD)

Professor & Head
Department of Anatomy
SIMS, HAPUR (U.P.)

S. No: 188

Title of the Collaborative activity: A Comparative Evaluation of Efficacy And Safety of Nebivolol Plus Amlodipine Between Atenolol Plus Amlodipine Combination in Hypertensive Patinets : A Randomized, Open Label, Prospective Study In Tertiary Care Hospitals

Name of the collaborator: Department of Pharmacology , F H Medical Collage, Elmadpur Agra(UP)- 282001

Name of the participants: Amit Kumar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 188

SANTOSH Deemed to be University (Established u/s 3 of the UGC Act, 1956)

FHMC

Letter of Research Collaboration

This is hereby agreed with Santosh University (Ghaziabad) through respective authorized signatories of F.H.Medical College Etmadpur Agra U.P. Collaborates for Research as per following details:

Till of Research: **"A Comparative Evaluation of Efficacy And Safety Of Nebivolol Plus Amlodipine Between Atenolol Plus Amlodipine Combination In Hypertensive Patients: - A Randomized, Open Label, Prospective Study In Tertiary Care Hospitals."**

Name of Primary Researcher: AMIT KUMAR

Co-Researcher (if any): NIL

Research Location: **Santosh University (Ghaziabad)/F.H. Medical College, Etmadpur Agra UP.**

Co-guide/Mentor Allocated: Dr. ANIL KUMAR SHARMA

Designation & Address of Co-guide/Mentor: Professor of Medicine Department
F.H. Medical College,
Etmadpur Agra UP.

Duration of Project: from .....April 2019.....to.....April 2021.....

Under this agreement, the two institutions agree to share their infrastructure and resources for the said research work.

For Santosh Deemed to be University
Dean Research

Name and Signature of HOD/Principal/
Dean-Santosh University
No.1, Santosh Nagar, Pratap Vihar,
Ghaziabad, Uttar Pradesh 201009

Name and Signature of
HOD/Principal/Dean (Collaborating Institute)
(Collaborating Institute)

Dr. Anil Kumar Sharma
(Head of Department)
Department of General Medicine
F.H. Medical College, Tundla

S. No: 189

Title of the Collaborative activity: Role of fingerprint patterns in the histopathologically diagnosed breast cancer females

Name of the collaborator: 1. Bindu Singh-Department of Anatomy, B.R.D. Medical College, Gorakhpur, Uttar Pradesh, India

Name of the participants: Singh, V., Jafar, S., Kaul, N., Singh, B

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

Role of Fingerprint Patterns in the Histopathologically Diagnosed Breast Cancer Females

Vishram Singh, Sajjad Jafar[1], Nisha Kaul, Bindu Singh[2]

Department of Anatomy, Santosh Medical College, [1]Department of Anatomy, Santosh Medical College, Santosh Deemed University, Ghaziabad, [2]Department of Anatomy, B.R.D. Medical College, Gorakhpur, Uttar Pradesh, India

Abstract

Introduction: Breast cancer is the most common cancer among women in India followed by cervical cancer. It is a major threat to women today with nearly half a million deaths attributed mainly to the lack of early diagnosis. A fingerprint pattern determination is genetic, but it has been reported to be affected by the environmental factors in the first trimester of pregnancy. The importance of fingerprints in the modern world is not restricted to the field of forensic and criminal applications only. The purpose of this study is to examine the fingertip patterns among women with histopathologically diagnosed breast cancer and controls. **Material and Methods:** The study was conducted 145 histopathologically diagnosed breast cancer women and their fingerprint patterns compared with 145 normal healthy women with no family history of breast cancer. **Results:** The fingerprint patterns were analyzed between breast cancer and control group of individuals, which showed statistically difference. The most common pattern found in breast cancer females was ulnar loop (67.93%) followed by whorl (24.68%) arches (4.13%) and radial loop (3.24%)while in the normal females, the most common pattern was whorl (50.82) follow by arches (17.58%) radial loop (16.27%) and ulnar loop (15.31%). **Discussion and Conclusion:** According to our study, we conclude that dermatoglyphics may help in identifying women with risk of breast cancer. The dermatoglyphics can serve as an inexpensive, noninvasive anatomical and effective tool to determine the individuals with breast cancer in their future.

Keywords: *Arches, breast cancer, fingerprint patterns, radial loops, ulnar loops, whorls*

Introduction

Breast cancer is the most common cancer among women in India followed by cervical cancer.

It is a major threat to women today with nearly half a million deaths attributed mainly to the lack of early diagnosis.

Breast cancer constitutes a major public health issue globally with over 1.7 million new cases diagnosed in women in 2012, and 6.3 million women are alive with breast cancer in the past 5 years annually.[1]

According to the Indian Council of Medical Research, the estimated number of breast cancer cases would be approximately 90,659, 106,124, and 123,634 in the years 2010, 2015, and 2020, respectively.

Dermatoglyphics is the scientific study of the details of finger ridge structure. The term dermatoglyphics has its origin from Greek words "derma" means skin and "glyphic" means curved. Cummins in 1926 introduced the term dermatoglyphics that refers to the study of the naturally occurring patterns of the surface of the hands and feet.[2]

The dermal ridges develop in relation to the volar pads, which are also formed by the 6th week of gestation, and they reach their maximum size between the 12th and 13th weeks. This means that the genetic message normal or abnormal is deciphered during this period and it is reflected by dermatoglyphics. A fingerprint determination is genetic, but it has been reported to be affected by the environmental factors in the first trimester of pregnancy. Fingerprint patterns are unique to the individual, but they vary from person to person in their number, shape, position, and types.

The search of literature has shown that a family history of breast cancer might be associated with a specific fingerprint pattern. The study of the fingerprints

How to cite this article: Singh V, Jafar S, Kaul N, Singh B. Role of fingerprint patterns in the histopathologically diagnosed breast cancer females. J Anat Soc India 2019;68:211-4.

Article Info

Received: 21 August 2019
Accepted: 21 November 2019
Available online: 07 January 2020

Address for correspondence:
Dr. Sajjad Jafar,
Department of Anatomy,
Santosh Medical College,
Santosh Deemed University,
Ghaziabad, NCR, Delhi,
Uttar Pradesh, India.
E-mail: sajjadjaferkhan96@yahoo.com

Access this article online

Website: www.jasi.org.in
DOI: 10.4103/JASI.JASI_109_19
Quick Response Code:

S. No: 190

Title of the Collaborative activity: Determination of the gallbladder wall thickness in patients with cholecystitis and cholelithiasis by ultrasonography in North Indian population

Name of the collaborator: 1. Richa Tiwari-Department of Radiology, Government Medical College, Saharanpur, Uttar Pradesh, India

Name of the participants: Vishram Singh, Durgesh Singh, Ashutosh Tandon, Yogesh Yadav, Richa Tiwari

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 190

Determination of the gallbladder wall thickness in patients with cholecystitis and cholelithiasis by ultrasonography in North Indian population

Vishram Singh[1], Durgesh Singh[1], Ashutosh Tandon[2], Yogesh Yadav[1], Richa Tiwari[2]

[1] Department of Anatomy, Santosh Medical College and Hospital, Santosh Deemed to be University, Ghaziabad, Delhi-NCR, Uttar Pradesh, India

[2] Department of Radiology, Government Medical College, Saharanpur, Uttar Pradesh, India

Date of Web Publication 18-Nov-2019

Correspondence Address:
Dr. Durgesh Singh
Ph.D Scholar, Department of Anatomy, Santosh Medical College and Hospital, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh India
Login to access the email ID

Source of Support: None, **Conflict of Interest:** None

DOI: 10.4103/ami.ami_33_19

Abstract

Objective: The objective of the study was to determine the gallbladder (GB) wall thickness in patients with cholecystitis and cholelithiasis with the help of ultrasonography in North Indian population for the estimation of epidemiology. **Aim:** The aim was to estimate epidemiology of the GB wall thickness in patients with cholecystitis and cholelithiasis by ultrasonography in North Indian population. **Materials and Methods:** This was a hospital-based case–control study. Patients with cholecystitis and cholelithiasis of age between 15 and 70 years of either sex were included in the study. The GB wall thickness was determined in the fasting state. A total of 50 samples, 36 cases (with diseased bladder) and 14 controls (with normal bladder) were included in the study. **Results:** More than one-third of cases (38.9%) were between 30 and 40 years. The mean age of cases and controls was 42.22 ± 12.81 and 35.43 ± 11.85 years, respectively. More than one-third of both cases (36.1%) and controls (35.7%) were males. The GB wall thickness was significantly ($P = 0.005$) higher among the cases (4.06 ± 2.28 mm) than that of controls (2.22 ± 0.67 mm). Full distention of the GB was in more than half of both cases (69.4%) and controls (57.1%). Partial distended was in 11.1% of cases and in 21.4% of controls. Contracted (8.3%) and overdistended (2.8%) were only seen among cases. The GB wall thickness of ≥3 mm was among 66.7% of patients and in 14.3% of controls. The GB wall thickness of <3 mm was 92% lower in cases compared to controls (odds ratio = 0.08, 95% confidence interval = 0.01–0.43, $P = 0.001$). **Conclusion:** During ultrasonography, a higher degree of the GB wall thickness was found in patients with cholecystitis and cholelithiasis as compared to the control group.

Keywords: Carcinoma, cholecystitis, cholelithiasis, epidemiology, gallbladder wall thickness, ultrasonography

How to cite this article:
Singh V, Singh D, Tandon A, Yadav Y, Tiwari R. Determination of the gallbladder wall thickness in patients with cholecystitis and cholelithiasis by ultrasonography in North Indian population. Acta Med Int 2019;6:78-81

How to cite this URL:
Singh V, Singh D, Tandon A, Yadav Y, Tiwari R. Determination of the gallbladder wall thickness in patients with cholecystitis and

S. No: 191

Title of the Collaborative activity: Gender difference in the left coronary artery: An angiographic study

Name of the collaborator: 1. Rakesh Gupta-Professor & HOD, Department of Anatomy, RMCH, Bareilly, U.P, India, 2. Nitin Agarwal-Assistant Professor, Department of Radiology, RMCH, Bareilly, U.P, India

Name of the participants: Vishram Singh, Suresh Babu Kottapalli, Rakesh Gupta, Nitin Agarwal, Yogesh Yadav

Year of collaboration: 2019-20

Nature of the activity: Research

Original Article

ISSN (0): 2455-5274; ISSN (P): 2617-5207

Gender Difference in the Left Coronary Artery: An Angiographic Study.

Vishram Singh[1], Suresh Babu Kottapalli[2], Rakesh Gupta[3], Nitin Agarwal[4], Yogesh Yadav[5]

[1]Former Professor & HOD Department of Anatomy, Santosh Medical College, Deemed to be University, Ghaziabad, Delhi NCR, [2]Ph.D. Scholar, Department of Anatomy, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Delhi NCR, [3]Professor & HOD, Department of Anatomy, RMCH, Bareilly, U.P, India, [4]Assistant Professor, Department of Radiology, RMCH, Bareilly, U.P, India, [5]Professor Department of Anatomy, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Delhi NCR.

Abstract

Introduction: The prevalence of coronary artery disease in India has led to a rapid transition in health status. Knowledge of coronary artery anatomy including anomalies and variations according to region is very important for clinical therapeutic surgeries. The heart was supplied by two coronary arteries i.e. right and left coronary arteries respectively. Out of two arteries, Left Coronary Artery (LCA) irrigates most of the area of the heart and presents wide variability in its morphology. **Subjects and Methods**: The present study was carried out in two hundred fifty healthy individuals out of whom one hundred twenty were male. **Results:** According to division of Left Coronary artery, Bifurcation was seen in 107 males and 111 females. Trifurcation of left coronary artery was seen in seventeen males and twelve females and quadrification was seen in one male and two females. Length of left coronary artery was significantly high in females and diameter was more in males. **Conclusion:** The findings in this study can help to understand the significant association between the length and angle of division of left coronary artery. The knowledge about anatomy and variations of left coronary artery is very useful for cardiologists to treat clinical complications.

Keywords: Division of Left Coronary Artery, myocardial infarction, coronary artery disease.

Corresponding Author: Dr Suresh Babu Kottapalli, Ph.D. Scholar, Department of Anatomy, Santosh Medical College, Deemed to be University, Ghaziabad, Delhi NCR.

Received: December 2019
Accepted: December 2019

Introduction

The rise in coronary heart disease in India has led to a rapid transition in health status. Prevalence of coronary artery disease is around 3 - 4% in rural areas and 8 - 10% in urban areas among adults older than 20 years.[1] "Anomaly is reffered as the variation that occurs in less than 1% of the general population".[2]
Knowledge of coronary artery anatomy, its variations and anomalies related to coronary circulation is very essential for good clinical outcome following therapeutic procedures, like coronary bypass grafting, angioplasty etc.

The heart is supplied by the two coronary arteries and their branches. The right and left coronary arteries (RCA and LCA) originate at the base of the ascending aorta, within the aortic sinus, as the first branches of this vessel. Blood pressure here is the highest found anywhere in the systemic circulation. This pressure ensures continuous flow of blood to meet the demand of cardiac muscle tissue. Variations occasionally occur in their origin and branching patterns. Each coronary artery is the primary source of supply to its same side atrium and ventricle, but also supply opposite side chambers to some extent.[3]

The LCA supplies most of the area of the heart. The area irrigated by each of coronary arteries using postmortem angiography shows that the LCA irrigates 68.8% of the cardiac muscular tissue (41.5% by Left Anterior Descending and 27.3% by the Circumflex artery).[4] These values varies depending upon the dominant pattern.
The LCA presents wide variability in its morphology (length and calibre) and the number of branches from its trunk. The knowledge of such variations is essential in determining areas related to arterial occlusive disease, hemodynamic procedures, handling heart surgery and finally in terms of educational value.
The length of the LCA extends from the origin at aortic sinus to its division as its terminal branches. The course of the LCA is rarely longer than two centimetres in adults. Then it divides into the circumflex (Cx) and anterior interventricular artery (AIA) branches.[5] Now a days it became very useful to explore the LCA anatomy and its variations because there is extensive use of radiographic images for interventional and diagnostic purposes.[6,7] Further, it is also useful in the development of surgical, non-invasive treatment of Coronary Artery Disease (CAD).[8]
Since decades the anatomy of coronary arteries has been

S. No: 192

Title of the Collaborative activity: Study of Coronary Domination in North Indian Population

Name of the collaborator: 1. Rakesh Gupta-Professor& HODDepartment of AnatomyRohilkhand Medical college and Hospital (RMCH), Bareilly, 2.Dr. Nitin Agarwal-Assistant ProfessorDepartment of MedicineRMCH, Bareilly.

Name of the participants: Vishram Singh, Suresh Babu Kottapalli, Rakesh Gupta, Nitin Agarwal, Yogesh Yadav

Year of collaboration: 2019-20

Nature of the activity: Research

IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 4 Ser. 6 (April. 2019), PP 50-52
www.iosrjournals.org

Study of Coronary Domination in North Indian Population

DrVishram Singh[1]Mr. Suresh Babu KottapalliDr. Rakesh Gupta[3], Dr. Nitin Agarwal[4], Dr. Yogesh Yadav[5]
[1]*Professor& HODDepartment of AnatomySontosh Medical College (SMC), Ghaziabad.*
2. Ph.D Scholar, Santosh medical College (SMC), Ghaziabad
[3]*Professor& HODDepartment of AnatomyRohilkhand Medical college and Hospital (RMCH), Bareilly.*
[4]*Assistant ProfessorDepartment of MedicineRMCH, Bareilly.*
[5]*Professor, Department of Anatomy, SMC, Ghaziabad*
Corresponding Author: Mr. Suresh babu Kottapalli

Abstract
Background: *Coronary artery disease is one of the major reasons for death in developing countries like India. Dominance pattern of the heart has an important clinical significance. Left dominant anatomy is believed to be associated with worse prognoses for patients with acute coronary syndrome and stable coronary artery disease. Not much study has been done in North India regarding dominance of coronary artery. This study was to determine the pattern of coronary artery dominance in North Indian hearts.*
Results: *This study was carried on 76 specimens of cadaveric hearts and observed for the dominance of coronary arteries. Out of 100 specimens studied, the posterior interventricular artery originated from RCA (right coronary artery) in 83 (83%) cases, in 14 (14%) cases posterior interventricular artery originated from LCA, in 3 (3%) cases posterior interventricular artery originated from both RCA and LCA*
Conclusions: *Considering the risk of higher mortality in left coronary dominance and coronary co-dominance pattern, more prevalence of myocardial infarction in left coronary dominance.. This study would be helpful to the cardiologists, radiologists and surgeons of North India.*
Keywords:*Coronary artery disease, coronary domination, myocardial infarction.*

Date of Submission: 24-03-2019 Date of acceptance: 08-04-2019

I. Background

In developed countries, Coronary artery disease is one of the major reasons for death. Hettler classified the following types of coronary circulation:right coronary artery dominance(RD), left coronary artery dominance(LD), and co-dominant(CD)(1).

In eighty five percent of the individuals, the right coronary artery (RCA) is dominant. In fifteen percent,the RCA is non dominant in which one half have PDA and posterolateral branch arising from the distal circumflex artery called left dominance and in the remaining half the RCA gives rise to PDA and the left circumflex artery (LCx) provides all the posterolateral branches called codominant circulation(2).

Dominance pattern of the heart has an important clinical significance. Left dominant anatomy is believed to be associated with worse prognoses for patients with acute coronary syndrome (ACS) and stable coronary artery disease(3), (4). LD was found to have significantly higher mortality than RD and mixed types(5). Knowledge of coronary artery variations and pathologies is important in planning the treatment and in interpretation of findings of cardiovascular diseases(6).

Not much study has been done in North India regarding dominance of coronary artery. This study was to determine the pattern of coronary artery dominance in North Indian human hearts.

II. Methods

This study was carried out in 76adult heart specimens. The specimen human hearts used for this study were obtained from routine dissection conducted for undergraduate students from the Department of Anatomy, Rohilkhand medical college, Bareilly and Department of anatomy, Santosh Medical College, Ghaziabad.

Thoracic cavity was opened by cutting the ribs and sternum, the great vessels were ligated. The parietal pericardium was incised and heart along with great vessels were taken out of the pericardial cavity. Each specimen was thoroughly washed to free it from the blood clots. All specimens were preserved in 10% formalin solution. The specimens were labelled numerically. The origin of right coronary artery from the ascending aorta is identified. The right coronary artery lies in between right auricle and right side of pulmonary trunk. Then the right coronary artery is dissected along its course running in the right atrioventricular groove and traced on the

S. No: 193

Title of the Collaborative activity: Morphometric Evaluation Of Anterior Aspect Of Atlas And Axis

Name of the collaborator: 1. Poonam Patnaik-Associate Professor, Department of Anatomy, Faculty of Dentistry, Jamia Millia Islamia, New Delhi, 2. Dalvinder Singh-Professor, Department of Anatomy, Faculty of Dentistry, Jamia Millia Islamia, New Delhi

Name of the participants: Poonam Patnaik ,Yogesh Yadav, Dalvinder Singh

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL RESEARCH PAPER

Volume-8 | Issue-5 | May-2019 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

MORPHOMETRIC EVALUATION OF ANTERIOR ASPECT OF ATLAS AND AXIS

Anatomy

Poonam Patnaik Associate Professor, Department of Anatomy, Faculty of Dentistry, Jamia Millia Islamia, New Delhi

Yogesh Yadav Professor, Department of Anatomy, Santosh Medical College, Ghaziabad, NCR

Dalvinder Singh* Professor, Department of Anatomy, Faculty of Dentistry, Jamia Millia Islamia, New Delhi
*Corresponding Author

ABSTRACT

Background: Median atlanto-axial joint dislocation and fracture of dens may require the surgical decompression by anterior approach in certain cases.

Aim and objective: To evaluate the dimensions of anterior part of atlas and axis vertebrae quantitatively and discuss its clinical importance.

Material and Methods: Morphometric measurements were done for forty atlas (thickness, transverse distance, height of anterior arch) and forty axis vertebrae (odontoid height, widest odontoid diameter in coronal plane, height and width of facet on dens). Mean, standard deviation, standard error and 95% confidence interval were calculated for each parameter.

Results: The mean anterior arch thickness and height were 5.81 +/- 1.19 mm and 11.45+/-2.79 mm respectively. The distance between medial margins of lateral masses was 15.58 +/- 2.75mm. The height and widest odontoid diameter were 15.26+/-2.51mm and 10.68+/- 0.78 mm respectively.

Conclusions: Our study provides the useful data on dimensions of atlas and axis for anterior approach surgery at c1-c2 junction.

KEYWORDS

Atlas, Axis, Dens, Morphometry

Introduction

The first two cervical vertebrae, Atlas and Axis, differ from other cervical vertebrae in their anatomical features. Odontoid process of axis forms the median atlanto-axial joint with anterior arch of atlas. Different pathological disorders may produce atlanto-axial translocation with ventral compression of the brain stem or spinal cord resulting in spinal cord contusion with rapidly progressive myelopathy. Different surgical techniques like inter-laminar clamp, inter-spinous wiring, plate and screw fixation, are used for correction of the unstable atlanto-axial complex or occipito-cervical junction caused by various traumatic and non traumatic conditions. In recent times trans-articular and trans-pedicular screws fixation for the stabilization of cervical column have been used widely(Madawi et al., 1997; Dickman & Hurlbert, 1998; Mandel, Kambach, Petersilge, Johnstone, & Yoo, 2000),but these procedures carry a probable risk of damage to nearby vital structures in the absence of accuracy.(Sengul & Kadioglu, 2006) .Besides these, the posterior approach fixation of axis and atlas, is accompanied by restricted rotatory movement of atlas. Type II and type III fractures of dens may require screw fixation by anterior transoral route. In some cases brainstem ventral decompression is done by removal of odontoid process through transoral route.(Tun et al., 2008) For this procedure, knowledge of dimensions of anterior atlanto-axial complex will be definitely useful for surgeons. There is dearth of literature on the quantitative anatomy of atlas and axis. With this aim, the paper presents the morphometric analysis of anterior arch of Atlas and Dens of axis.

Material and Methods:

Macerated dried atlas and axis vertebrae (40 each), of unknown sex and age, kept in the museum of department of Anatomy were subjected to measurements with the help of fixable manual caliper and Vernier caliper. The following dimensions of the atlas and axis were measured as shown in figure1.

- A. Thickness of anterior arch of atlas at mid point
- B. Maximum horizontal diameter of anterior arch (Distance between medial margins of lateral masses)of atlas
- C. Height of anterior arch of atlas in midline
- D. Widest odontoid diameter in coronal plane
- E. Height of odontoid process
- F. Height of facet (for anterior arch) on dens
- G. Width of facet (for anterior arch) on dens

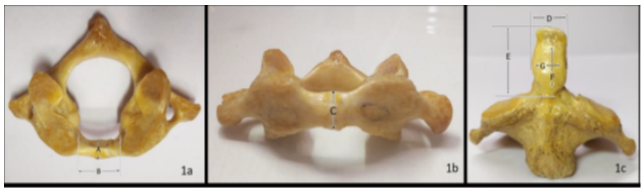

Figure 1: Linear measurements taken on atlas and axis

Statistics: The data was analyzed in Excel. With Descriptive statistics mean, standard deviation, standard error and 95% confidence interval were calculated for each parameter.

Observations and Results: The results of all the parameters of atlas and axis were as shown in table I.

Table I: Descriptive statistics of the parameters of atlas and axis (n=40)

Parameters	Definition	Mean ± SD(mm)	Range (mm)		S.E.	95%Confidence limits	
			Min.	Max.		Lower	Upper
A	Atlas anterior arch thickness	5.81 ± 1.19	2.7	8.92	0.191	5.43	6.19
B	The distance between medial borders of lateral masses of atlas	15.583 ± 2.75	12.26	23.21	0.435	14.70	16.46
C	Atlas anterior arch height	11.45 ± 2.79	5.34	19.24	0.44	10.56	12.34
D	Widest odontoid diameter	10.68 ± 0.78	9.06	11.94	0.123	10.427	10.923
E	Height of odontoid process	15.26 ± 2.51	12.04	21.28	0.396	14.457	16.061
F	Height of facet (for anterior arch) on dens	9.64 ± 1.31	6.48	11.68	0.207	9.228	10.068
G	Width of facet (for anterior arch) on dens	7.37 ± 1.19	5.34	9.42	0.188	6.993	7.755

SD: Standard Deviation ; SE: Standard Error

S. No: 194

Title of the Collaborative activity: What Is The State Of Awareness Of Janani Suraksha Yojna In Aligarh: A Comparison Between Rural And Urban Areas

Name of the collaborator: 1. Neha PriyaTeerthankar Mahaveer Medical College and Hospital, Moradabad, Uttar Pradesh, 2. Zulfia KhanJawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh

Name of the participants: Priya N., Khan Z., Mehnaz S., Kumar V.

Year of collaboration: 2019-20

Nature of the activity: Research

JORIGINAL ARTICLE

What is the state of awareness of Janani Suraksha Yojna in Aligarh: a comparison between Rural and Urban Areas.

Neha Priya[1], Zulfia Khan[2], Saira Mehnaz[3], Vishwanath Kumar[4]

[1]Associate Professor, Departments of Community Medicine, Teerthankar Mahaveer Medical College and Hospital, Moradabad, Uttar Pradesh, India; [2]Ex Professor, Departments of Community Medicine, Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh, India; [3]Professor, Departments of Community Medicine, Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh, India; [4]Associate Professor, Departments of Anaesthesiology, Santosh Medical College and Hospital, Santosh Deemed University, Ghaziabad, NCR Delhi, India

Abstract | Introduction | Methodology | Results | Conclusion | References | Citation | Tables / Figures

Corresponding Author

Corresponding Author: Dr. Saira Mehnaz, Departments of Community Medicine, Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh, India - 202002
E Mail ID: docsaira@gmail.com

Citation

Priya N, Khan Z, Mehnaz S, Kumar V. What is the state of awareness of Janani Suraksha Yojna in Aligarh: a comparison between Rural and Urban Areas. Indian J Comm Health. 2019;31(4):541-548.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 22/08/2019; **Revision:** 10/12/2019; **Accepted:** 25/12/2019; **Published:** 31/12/2019

Abstract

Background: Maternal mortality and morbidity continues to remain high in India, despite the existence of successive national programs for improving maternal and child health since the 1980s. In 2005, the Government of India launched the National Rural Health Mission to provide accessible, affordable and quality health care to the rural population, especially the vulnerable populations. Reduction in MMR to 100/100,000 is one of its goals and the Janani Suraksha Yojana is the key strategy to achieve this reduction. But the awareness of scheme is low in women from rural areas and urban slums, especially in low performing states. **Aims:** To study the comparative awareness of JSY and the socio-demographic factors influencing it, among the recently delivered women (RDWs). **Methodology:** A community based cross-sectional study was carried out in the ten rural areas and urban slums coming under the practice areas of JNMC, AMU, Aligarh for a period of one year. The prevalence of institutional delivery in Uttar Pradesh as found in a study by UNFPA 2008 (50.2%) was used for calculation of sample size. The yielded sample size 300 was selected proportionately from these areas. The study subjects were interviewed by a pre-designed and pre-tested questionnaire. Statistical analysis used: MS excel, chi square and logistic regression. **Results**: Awareness regarding the existence of a monetary scheme related to institutional delivery was more in rural areas i.e 75%. Regarding components of JSY maximum people (78%) were aware about the cash component. Religion, caste, parity, socio-economic status and place of residence showed a significant statistical association with the level of awareness of JSY. **Conclusions:** There is an urgent need to strengthen IEC campaigns and monitoring strategies for JSY as well as regularize the monetary flow for the health workers

Keywords

Maternal mortality; Janani Suraksha Yojana; slums; rural population

S. No: 195

Title of the Collaborative activity: Awareness and utilization of Geriatric Welfare Schemes among urban elderly population of District Gautambudh Nagar.

Name of the collaborator: 1. Neha Tyagi-School of Medical Sciences and Research, Greater Noida, 2. Manish Chaturvedi-National Institute of Health & Family Welfare, Delhi

Name of the participants: 1. Neha Tyagi-School of Medical Sciences and Research, Greater Noida, 2. Manish Chaturvedi-National Institute of Health & Family Welfare, Delhi

Year of collaboration: 2019-20

Nature of the activity: Research

ORIGINAL ARTICLE

Awareness and utilization of Geriatric Welfare Schemes among urban elderly population of District Gautam Budh Nagar

Deepika Agrawal[1], Neha Tyagi[2], Jagmohan Singh Dhakar[3], Manish Chaturvedi[4]

[1]Professor and Head, Department of Community Medicine, Santosh Medical College, Ghaziabad; [2]Assistant Professor, Department of Community Medicine, School of Medical Sciences and Research, Greater Noida; [3]Statistician cum Assistant Professor, Department of Community Medicine, Santosh Medical College, Ghaziabad

[4]Professor, National Institute of Health & Family Welfare, Delhi

Abstract | Introduction | Methodology | Results | Conclusion | References | Citation | Tables / Figures

Corresponding Author

Corresponding Author: Dr Neha Tyagi, Assistant Professor, Department of Community Medicine, School of Medical Sciences and Research, Greater Noida
E Mail ID: ntyagi.18@gmail.com

Citation

Agrawal D, Tyagi N, Dhakar JS, Chaturvedi M. Awareness and utilization of Geriatric Welfare Schemes among urban elderly population of District Gautam Budh Nagar. Indian J Comm Health. 2019;31(3):315-321.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 27/07/2019; **Revision:** 10/09/2019; **Accepted:** 20/09/2019; **Published:** 30/09/2019

Abstract

Background: India has 8.6% elderly population which is going to increase to 12% by 2025. Government of India is providing for the elderly through various social security and welfare schemes as well as legislations. But various studies, mostly in rural areas have shown that the awareness regarding these schemes was poor and incomplete. Utilization of schemes by the beneficiaries was even poorer. Very few studies have assessed the same in urban areas. **Aims & Objectives**: To assess the awareness and utilization of geriatric welfare schemes and factors associated with them among urban elderly. **Material & Methods**: The study was conducted in urban field practice area of Dept of Community Medicine, SMS&R, Greater Noida. 402 elderly living in slums of Bhangel, Noida, were interviewed using semi structured questionnaire assuming 50% awareness levels in the urban area with 10% relative precision and 95% confidence interval. **Results**: Awareness regarding any one scheme was 31.6%, of whom only one fourth subjects knew about more than one scheme. Among those who knew about the schemes, only 40% were utilizing them. The awareness as well as utilization was found to be significantly associated with religion, caste and educational status of the subject. **Conclusion**: The study shows poor awareness and even poorer utilization of geriatric welfare schemes among elderly people of urban slums. Further studies are required for judging the influencing factors.

Keywords

Welfare; Geriatric; Awareness; Utilization; Factors; Urban

Introduction

India is a vast country and is currently undergoing a demographic transition from wide base narrow top to barrel shaped demographic pyramid. (1) This means that the proportion of middle aged and elderly people is increasing in the country. According to Census 2011, India has a total of 8.6% of elderly population (2) and WHO estimates that the proportion of elderly people in the South East Asia Region will increase from 8% to 12% by 2025. This means an increase of 100 million elderly people. (3) This has huge implications for all the South East Asian countries including India.

Advanced age brings with it financial dependency (partial or total) due to retirement from occupation,

S. No: 196

Title of the Collaborative activity: Morphometric Study of Pinna in Relation to Age in Uttar Pradesh Population

Name of the collaborator: 1. Vidit Pratap Dixit-1Senior Demonstrator, Department of Anatomy, Rama Medical College Hospital and Research Centre, Hapur, U.P, India

Name of the participants: Vidit Pratap Dixit, Pratishtha Potidar, Jagmohan Singh Dhakar

Year of collaboration: 2019-20

Nature of the activity: Research

SSR Inst. Int. J. Life Sci.

ISSN (O): 2581-8740 | ISSN (P): 2581-8732
Dixit *et al.*, 2019
DOI:10.21276/SSR-IIJLS.2019.5.5.2

Research Article

open access

Morphometric Study of Pinna in Relation to Age in Uttar Pradesh Population

Vidit Pratap Dixit[1], Pratishtha Potdar[2*], Jagmohan Singh Dhakar[3]

[1]Senior Demonstrator, Department of Anatomy, Rama Medical College Hospital and Research Centre, Hapur, U.P, India
[2]Associate Professor, Department of Anatomy, Santosh Medical College, Ghaziabad, U.P, India
[3]Statistician cum Assistant Professor, Department of Community Medicine, Santosh Medical College, Ghaziabad, U.P, India

***Address for Correspondence:** Dr. Pratishtha Potdar, Associate Professor, Department of Anatomy, Santosh Medical College, Ghaziabad, India
E-mail: drpratishthagupta@gmail.com

Received: 11 Apr 2019/ Revised: 09 Jul 2019/ Accepted: 27 Aug 2019

ABSTRACT

Background: Morphometric dimensions of ear plays a very important role in plastic surgery and prosthetics. This study aimed to determine different morphometric parameters of both ear and to provide information regarding age related changes.

Methods: A study was conducted on 167 subjects including both males and females. The ear was measured using vernier caliper with an accuracy of 0.001 and recorded in millimeters (mm) in a data sheet. The size of pinna and the lobule were measured on both right and left side and were correlated with age of the individual. Readings were statistically analyzed in order to determine the relationship between the size of the pinna and the age of the individual.

Results: In our study of age 18–30 ear length was 6.15 cm, lobule length and width was 1.87 cm and 1.99 cm and in age 31–40 ear length was 6.32 mm, lobular length and width was 1.95 cm and 2.01 cm and in age 41–50 yrs ear length was 6.415 cm, lobular length and width was 1.98 cm and 2.06 cm. This shows that in our study ear length were increasing significantly with age and similarly Rt and Lt lobular length and Lt lobular width were also increasing significantly with the age. There was no significant difference between the size of the right and left pinna.

Conclusion: The present study shows that the expansion of auricle with age was related to structural change in auricular cartilage. The ear morphometry also helps in predicting ear anomalies and to reproduce anatomically corrected ear during its reconstruction.

Key-words: Ear auricle, Ear length, Ear lobule, Ear width, Morphopometry

INTRODUCTION

Human ear is a complex, curved inter wined substructure as compared to rest of human body, its shape is framed in such a way to allow spatial localization of sounds [1]. Human ear convey sign of age and gender that are ill defined [2]. The anatomical structures of the external ear are utilized for personal identification of living subjects in relation to criminal activity.

How to cite this article
Dixit V, Potdar P, Dhakar JS. Morphometric Study of Pinna in Relation to Age in Uttar Pradesh Population. SSR Inst. Int. J. Life Sci., 2019; 5(5): 2379-2386.

Access this article online
https://iijls.com/

There have been claims in recent years that the external ear may be utilized for personal identification of both living and deceased individuals [3]. So knowledge about normal auricular dimensions is important in diagnosis of congenital malformation syndromes and acquired deformities. The size of human auricle continues to enlarge until advanced age and it is well known that this structural changes of auricular cartilage is associated with morphological age changes of elastic fibers, which was one of important cause of expansion of auricle even after adulthood [4,5]. Many studies have been done on expansion of ear auricle by measuring the size of auricle but mechanism of expansion is still not clear [6]. Although various studies on morphological changes of auricular cartilage with age changes and few on fine structure of auricular cartilage have been reported but

S. No: 197

Title of the Collaborative activity: Correlation between Size of Pinna & Height of Individual in Uttar Pradesh Population

Name of the collaborator: 1. Vidit Dixit-Senior Demonstrator, Department of Anatomy, Rama Medical College Hospital and Research Centre, Hapur U.P

Name of the participants: Vidit Dixit, Pratishtha Potdar, Jagmohan Singh Dhakar

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 197

Original Article

ISSN (0): 2455-5274; ISSN (P): 2617-5207

Correlation between Size of Pinna & Height of Individual in Uttar Pradesh Population

Vidit Dixit[1], Pratishtha Potdar[2], Jagmohan Singh Dhakar[3]

[1]Senior Demonstrator, Department of Anatomy, Rama Medical College Hospital and Research Centre, Hapur U.P, [2]Associate Professor Department of Anatomy , Santosh Medical College, Ghaziabad U.P, [3]Statistician cum Assistant Professor, Department of Community Medicine, Santosh Medical College, Ghaziabad, U.P.

Abstract

Introduction: Morphometry of ear is a useful tool for the determination of height & other parameters of individual. The size of the pinna has been measured by some workers for designing hearing aids. No available literature on the study of correlation between the height of an individual and the size of pinna in different age and ethnic groups were available. In this study the height of the individual along with age and size of the pinna was measured in order to find out possible correlation in adult North Indian population. It was anticipated that a possible correlation could help in identification of different ethnic groups. **Subjects and Methods**: A study was conducted on 167 subjects including both males and females. The height of the individual was measured with the help of an anthropometric rod. The measurements related to total ear length & ear width and lobule length & width were taken with a digital Vernier Caliper & the height of the individual was measured using stadiometer & transparent graduated ruler. The pearson correlation were used to establish relationship. The data was analysed using SPSS version & $p<0.05$ was significant. **Results:** There was no difference between the size of the right and left pinna. The length of the pinna was 62.45±4.21 to 62.35±4.12mm and the width was 24.59±2.41 to 24.63±2.41mm. The length of the lobule varied between to 19.21±2.75 to 19.19±2.75mm and the lobule width was 20.14±2.54 to 20.10±2.56mm of both right and left pinna. In present study there was a significant correlation between rt ear length & width with the height of the individual. Similarly Rt lobule length, Lt lobule length & width also has significant correlation with height of individual. **Conclusion:** The present study reveals that the ear morphometry is an additional tool in prediction height from linear ear dimensions.

Keywords: Morphometry, Ear lobule, Ear height and Human auricle.

Corresponding Author: Dr. Pratishtha Potdar, Associate Professor, Department of Anatomy, Santosh Medical College, Ghaziabad, U.P. Pin-245304

Received: June 2019
Accepted: July 2019

Introduction

Morphometric measurements of different parts of the body have been used in determining the sex, age, racial characteristics, designing of prosthesis etc since for a long time. Some measurements have been extensively used while the others have not been analyzed frequently. Human ear is a defining feature of the face as structures in it convey signs of age and gender.[1] The auricle reaches its mature height at 13 yrs in male & 12 yrs in female so its known that size of auricle increases after completion of development.[2] The human ear is divided into external, middle and internal parts. The pinna and the external acoustic meatus form the external ear. The lateral surface of the pinna is irregularly concave, faces slightly forward and displays numerous eminences and depressions.[3] The anatomical structures of the external ear are utilized for personal identification of living subjects in relation to criminal activity. There have been claims in recent years that the external ear may be utilized for personal identification of both living and deceased individuals.[4] So, knowledge about normal auricular dimensions is important in diagnosis of congenital malformation syndromes & acquired deformities. The most famous work among ear identification is made by Alfred Iannarelli in 1989,[5] on 10000, ears and found that all ear were different but no attempt has been made by these authors to correlate the measurement different parts of the ear with the height of individual. Anthropometric data vary for individuals within a family or nation and between nations noted by Roebuck et. al.[6] similarly Saha,[7] also observed that there were difference in morphometric data of people from different regions in India. In this study we have measured the size of the pinna and lobule and tried to ascertain any correlation between size of the pinna and height of individual. This study is a preliminary report to describe the total pinna length and width in relation to height of a individual amongst adult North Indians (Aged 18 to 60 years). These morphometric data envisaged that anatomical and morphological differences and changes of the ear in relation to height of individual. With the appropriate normative data, it is hoped that better objective reference material would be provided for the aesthetic plastic surgeon, Forensic purpose,

S. No: 198

Title of the Collaborative activity: Evaluation of Zinc Oxide Eugenol and Vitapex for Carrying Out Endodontic Therapy of Necrotic Primary Teeth:Saudi Journal of oral Dental Research

Name of the collaborator: 1. Nishu Vakil - 1Department of Periodontology, Indira Gandhi Government Dental College, Jammu and Kashmir 180012, India

Name of the participants: Nishu Vakil, Abhishek Singh, V.K. Chhoker, Rajesh DR, Sana Tafseer, Shakir Ali

Year of collaboration: 2019-20

Nature of the activity: Research

OPEN ACCESS
Saudi Journal of Oral and Dental Research
Abbreviated Key Title: Saudi J Oral Dent Res
ISSN 2518-1300 (Print) |ISSN 2518-1297 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: http://scholarsmepub.com/sjodr/

Original Research Article

Evaluation of Zinc Oxide Eugenol and Vitapex for Carrying Out Endodontic Therapy of Necrotic Primary Teeth

Nishu Vakil[1*], Abhishek Singh[2], Virender K Chhoker[3], Rajesh DR[4], Sana Tafseer[5], Shakir Ali[6]
[1]Department of Periodontology, Indira Gandhi Government Dental College, Jammu and Kashmir 180012, India
[2]Department of Community Medicine, SHKM Government Medical College, Mewat, Nalhar, Haryana 122107, India
[3]Professor and Head, Department of Forensic Medicine, Santosh Medical College, Ghaziabad
[4]Department of Forensic Medicine, Indira Gandhi Medial College, Kathirkamam, Puducherry, 605009, India
[5]Department of Pharmacology, Al-Falah School of Medical Sciences, Al Falah university Campus, Dhouj, Haryana 121004, India
[6]Casualty Medical Officer, SHKM Government Medical College, Mewat, Nalhar, Haryana 122107, India
***Corresponding author:** Dr. Nishu Vakil
| **Received:** 17.05.2019 | **Accepted:** 25.05.2019 | **Published:** 30.05.2019
DOI:10.21276/sjodr.2019.4.5.16

Abstract

Background: Various root canal filling materials for primary teeth have been used from time to time; the most commonly used and readily available materials are zinc oxide eugenol and Vitapex. ***Aim:*** We conducted this study with the aim of comparing the effect of Zinc oxide eugenol and Vitapex for carrying out endodontic therapy of necrotic primary teeth. ***Methods:*** Study was performed on 165 teeth. Clinical and radiographic assessment of the patients was done pre-operatively. In the zinc oxide eugenol group, paste was prepared and paper points covered with the material were used to coat the root canal walls. In the Vitapex group, the premixed paste was packaged in a syringe with a number of disposable tips. ***Results:*** On pre-operative clinical and radiographic assessment of 165 teeth, pain was found among 116 (70.3%), bone radiolucency 90 (54.5%), abnormal mobility 75 (45.5%) subjects. Swelling outside the oral cavity was seen in least 31 (18.8%) number of subjects. Among subjects in which Zinc oxide eugenol was used, 31 (18.8%) subjects showed short fillings while in cases where Vitapex was used, 9.7 percent showed short fillings. ***Conclusion:*** Premixed calcium hydroxide and iodoform paste (Vitapex) offered as a healthy choice as a filling material following pulpectomy in primary non-vital teeth as compared to zinc oxide eugenol.
Keywords: Zinc oxide eugenol, pain relief, Vitapex, primary teeth.

INTRODUCTION

A key determinant of root canal treatment of the primary teeth depends upon the root canal material should resorb at the same rate as the physiologic resorption of the roots; the other factors are that the root canal material should be radiopaque, nontoxic to the periapical tissue and tooth germ, easy to insert, and non-shrinkable; it should also have disinfectant properties [1]. Endodontic treatment of primary teeth is more challenging than that of their permanent counterparts probably due to anatomical complexities of their root canal systems along with other factors [2].

Various root canal filling materials for primary teeth have been used from time to time; the most commonly used and readily available materials are zinc oxide eugenol and Vitapex. Zinc oxide eugenol has a slow rate of resorption and has a tendency to be retained even after tooth exfoliation; in some cases unresorbed material has been found to cause deflection of the succedaneous tooth [3, 4]. Another material being used is a premixed calcium hydroxide and iodoform paste (Vitapex) and is claimed to be a nearly ideal root canal filling material for primary teeth. The combination of antibacterial, resorbable, and tissue compatible properties make it feasible for use in primary teeth [5, 6].

Zinc oxide and eugenol paste was the first root canal filling material to be recommended for primary teeth. Another material Vitapex is claimed to be a nearly ideal root canal filling material for primary teeth [7, 8]. Keeping above facts in mind, we conducted this study with the aim of comparing the effect of Zinc oxide eugenol and Vitapex for carrying out endodontic therapy of necrotic primary teeth.

METHODS

The study was conducted at a tertiary care teaching dental hospital of northern India. Study was performed on 165 teeth. Assessment of the patients was performed pre-operatively. The presence of soft-tissue abscesses or sinus tracts around the tooth; evidence of pathologic processes on the radiographs, ranging from slight thinning of the trabecular pattern to large areas of

S. No: 199

Title of the Collaborative activity: Metabolic effects of oral vitamin D supplementation as an adjuvant therapy on subjects with type 2 diabetes, Int.J.basic.clin.pharmacol.

Name of the collaborator: 1. Sana TafseerDepartment of Pharmacology, Al-Falah School of Medical Sciences, Dhouj, Haryana, India, 2. Irfan Ahmad KhanDepartment of Pharmacology, Mayo Institute of Medical Sciences, Barabanki, Lucknow, India

Name of the participants: Sana Tafseer, Irfan Ahmad Khan, Avijit Roy, Pooja Goel, V.K. Chhoker, Abhishek Singh, Priyamvada Sharma

Year of collaboration: 2019-20

Nature of the activity: Research

Print ISSN: 2319-2003 | Online ISSN: 2279-0780

IJBCP International Journal of Basic & Clinical Pharmacology

DOI: http://dx.doi.org/10.18203/2319-2003.ijbcp20193192

Original Research Article

Metabolic effects of oral vitamin D supplementation as an adjuvant therapy on subjects with type 2 diabetes

Sana Tafseer[1], Irfan Ahmad Khan[2]*, Avijit Roy[3], Pooja Goyal[4], Virender K. Chhoker[5], Abhishek Singh[6], Priyamvada Sharma[7]

[1]Department of Pharmacology, Al-Falah School of Medical Sciences, Dhouj, Haryana, India
[2]Department of Pharmacology, Mayo Institute of Medical Sciences, Barabanki, Lucknow, India
[3]Directorate of Health Services, Port Blair, Andaman And Nikobar, India
[4]Department of Community Medicine, ESIC Medical College, Faridabad, Haryana, India
[5]Department of Forensic Medicine, Santosh Medical College, Ghaziabad, Uttar Pradesh, India
[6]Department of Community Medicine, SHKM Government Medical College, Mewat, Haryana, India
[7]Department of Pharmacology, FH Medical College And Hospital, Tundla, Uttar Pradesh, India

Received: 28 May 2019
Revised: 29 June 2019
Accepted: 02 July 2019

***Correspondence to:**
Dr. Irfan Ahmad Khan,
Email: abhishekparleg@gmail.com

ABSTRACT

Background: It is common for patients with type 2 diabetes mellitus (T2DM) to have vitamin D deficiency. Aim of the study is to determine the metabolic effects of oral vitamin D supplementation in a cohort of T2DM subjects.
Methods: Subjects with T2DM were divided into two groups. Group A (Control) included subjects who received the standard treatment (conventional antidiabetic drugs). Group B (Intervention), apart from the standard treatment (conventional antidiabetic drugs), was also supplemented with Vitamin D3. All the patients were followed up at baseline, 6 months, 12 months and 18 months.
Results: Vitamin D deficiency was noted down in all the study subjects. Even after 18 months of supplementation, all subjects remained vitamin D deficient. There was a significant improvement in the circulating levels of 25-hydroxyvitamin D. Improvement in the lipid profile of subjects was observed as evidenced by a decrease in total cholesterol (5.0±0.92 mmol/l) as compared to baseline (5.5±1.6 mmol/l). HOMA-IR changed significantly after 18 months of supplementation from baseline (7.0±1.06 vs 10.8±1.96 nmol/l).
Conclusions: Supplementation to achieve higher levels of vitamin D remains a promising adjuvant therapy for T2DM patients. Additionally, the intervention brought out a favourable change in HDL/LDL ratio among study subjects.

Keywords: Diabetes mellitus, Supplementation, Vitamin D

INTRODUCTION

Vitamin D is indispensable as well as vital for humans. Vitamin D can be obtained through a balanced die and is synthesized in the skin after sunlight exposure. Natural sources of vitamin D in foods are not sufficient to supply the normal body requirements. Thus, skin synthesis of vitamin D through exposure to sunlight is thought to

S. No: 200

Title of the Collaborative activity: Paraganglioma of superior laryngeal nerve mimicking as carotid body tumor: A rare case report.

Name of the collaborator: 1. Deepak Sundriyal – All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India, 2. Mudit Agrawal – Rajiv Gandhi Cancer Institute & Research Centre, Rohini, New Delhi, India

Name of the participants: Gyanendra S. Mittal, Deepak Sundriyal, Mudit Agrawal

Year of collaboration: 2019-20

Nature of the activity: Research

Case Report

Paraganglioma of superior laryngeal nerve mimicking as carotid body tumor: A rare case report

Gyanendra S. Mittal[1*], Deepak Sundriyal[2], Mudit Agrawal[3]

[1-3]Consultant: [1]Santosh Deemed to be University, Ghaziabad, Uttar Pradesh, [2]All India Institute of Medical Sciences, Rishikesh, Uttarakhand, [3]Rajiv Gandhi Cancer Institute & Research Centre, Rohini, New Delhi, India

***Corresponding Author: Gyanendra S Mittal**

Email: g20mittal@gmail.com

Abstract

A paraganglioma is rare neuroendocrine neoplasms arise from chromaffin cells that may develop at various body sites (including the head, neck, thorax and abdomen). About 97% are benign and remaining 3% are malignant because they are able to produce distant metastases. Vagal paragangliomas represent <5% of all head and neck paragangliomas, and till date only 200 cases have been reported.[1]

We present a case of paraganglioma of superior laryngeal nerve, because of rarity of the disease and after careful search no case report as tumor arising from the superior laryngeal nerve is found in the literature. Patient underwent pre-opeative investigations like CT Angio, MRI, DOTA-NOC Scan and tumor markers, intra-operatively it had seen that tumor was arising from superior laryngeal branch of vagus nerve. Patient recovered well after surgery and developed post operative neurological complications like voice changes and aspiration to liquids. These complications were managed conservatively. Absence of neurological symptoms, local invasion, indolent histological features and absence of lymph node metastasis confirm the frequent benign behaviour of these neoplasms.

Keywords: Paraganglioma, Superior laryngeal nerve, Vagus paraganglioma, Carotid body tumor, Head and neck tumours.

Introduction

Paragangliomas are slow growing, usually benign and rare neoplasms arising from chromaffin cells of neural crest and paraganglionic tissue. They are distributed throughout the body along with autonomic nervous tissue. The paraganglia in the head and neck region are anatomically associated with the parasympathetic nervous system and are located in the vicinity of major arteries and nerves, whereas the adrenal medulla and other paraganglia below the head and neck are more closely associated with the sympathetic nervous system.[2]

Vagal paragangliomas are uncommon tumours of the parapharyngeal space. They are usually asymptomatic for many years and slow growing tumors. They can be present as cranial nerve palsy (in about 10% of cases) with paralysis of either hypoglossal, glossopharyngeal, recurrent laryngeal or spinal accessory nerve. They may therefore, be associated with pain, hoarseness, dysphagia, Horner syndrome, or dropping of shoulder.[3]

Surgery is the main treatment modality. Radiotherapy may be used in selective cases or in palliative setting. We present this case because of rarity of the case and we did all the investigations like CT Angio, MRI, DOTA-NOC scan and tumor markers, pre-operatively case was diagnosed as carotid body tumor but intra-operatively it was actually arising from superior laryngeal nerve a branch of vagus nerve. Patient recovered well after surgery. Post operative neurological complications require careful rehabilitation and long term follow-up.

Case Report

A 50 years old lady came with complaints of swelling in right side of neck for 3 years, with mild discomfort. She had no voice complaints. On examination she was hypertensive and had a ≈ 2 × 1.5 cm firm, non-tender, non-pulsatile mass lesion in the right carotid triangle with minimal mobility. MRI neck (Fig. 1) revealed heterogenous signal intensity space occupying lesion on T1 of size 2 x 1.6 cm showing intence enhancement with irregular margins near the right carotid triangle,

S. No: 201

Title of the Collaborative activity: Proteomic Analysis of Circulating Immune Complexes from Tuberculosis Patients

Name of the collaborator: 1. Kiran Chawla-Department of Microbiology, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, India

Name of the participants: Kumar A., Chawla K., Thakur R., Joshi M.B., Satyamoorthy K., Bisht D

Year of collaboration: 2019-20

Nature of the activity: Research

S. No: 201

Kumar *et al. J Pure Appl Microbiol,* **13**(**2**), 1235-1244 | June 2019
Article 5562 | https://dx.doi.org/10.22207/JPAM.13.2.65

Print ISSN: 0973-7510; E-ISSN: 2581-690X

RESEARCH ARTICLE OPEN ACCESS

Proteomic Analysis of Circulating Immune Complexes from Tuberculosis Patients

Ajay Kumar[1], Kiran Chawla[2], Rupesh Thakur[3], Manjunath B. Joshi[4], Kapaettu Satyamoorthy[4] and Dakshina Bisht[1]*

[1]Department of Microbiology, Santosh Medical College and Hospital, Santosh Deemed to be University, NCR Delhi, India. [2]Department of Microbiology, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, India. [3]School of Life & Allied Science, ITM University, Atal Nagar, Raipur, C.G., India. [4]School of Life Sciences, Manipal Academy of Higher Education, Manipal, India.

Abstract

Circulating immune complexes (CIC's) are associated with disease progression in Tuberculosis (TB) though their role in pathogenesis is still unclear. Hence the present study was undertaken to identify proteins of diagnostic potential in tuberculosis by proteomic profiling of CIC's. Serum samples from tuberculosis patients (n=28), latent TB (n=10) and healthy (n=15) individuals were collected and CIC's levels were estimated by ELISA. CIC's were isolated by 7% Polyethylene Glycol precipitation and were subjected to proteomic analysis. Bioinformatic analysis and functional annotation of identified proteins was performed using Mascot search engine and PANTHER respectively. Identified protein was validated by ELISA. Statistical analysis was performed with SPSS version 16 and Graph pad prism 5. The mean CIC concentration in TB, latent TB and healthy individuals was found to be 38.23±11.45, 24.43±15.09, and 8.61±2.47µg/ml respectively. A total of 74, 48 and 60 proteins were identified in CIC's from of TB, latent TB and healthy individuals respectively. Among identified proteins the sensitivity, specificity, positive predictive value, negative predictive value and accuracy of C1qC to distinguishing TB patients from controls (with respect to both latent TB and healthy controls) was found to be 87.18% , 93.33%, 94.44%, 84.85% and 89.86% respectively. Our exploratory analysis suggests that immune-complex based assays might provide better alternate to invasive diagnostic techniques especially in diagnosis of extra pulmonary TB. However, further elaborate studies are required.

Keywords: Immune complexes, Mass Spectrometry, Proteomics, Tuberculosis.

***Correspondence:** dakshinabisht@gmail.com

(Received: 05 April 2019; accepted: 20 May 2019)

Citation: Ajay Kumar, Kiran Chawla, Rupesh Thakur, Manjunath B. Joshi, Kapaettu Satyamoorthy and Dakshina Bisht, Proteomic Analysis of Circulating Immune Complexes from Tuberculosis Patients, *J Pure Appl Microbiol*., 2019; **13**(**2**): 1235-1244. doi: 10.22207/JPAM.13.2.65

SANTOSH

Deemed to be University