

# NEW INDIAN JOURNAL OF SURGERY

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Ref. No.

दिनांक

Dated.

**MESSAGE**

It gives me a great pleasure to learn that MEDSICON 2011 is being organized and held at VMMC & Safdarjung Hospital, New Delhi this year.

Young minds are full of new ideas, innovative and thoughts. MEDSICON 2011 will give our future medicos a common platform to share their thoughts, ideas and research programmes through workshops, symposia, CME in different subjects and simultaneously help them to learn from their fellow medicos, apart from developing brotherhood among themselves.

It is a novel idea to start New Indian Journal of Surgery which will be the printing media for our young medicos to share their experience, ideas & thoughts with fellowmen. This is a great opportunity to be availed by our young medicos.

I thank the organizing chairman and his team in this endeavour of theirs.

I wish them all the best for a successful MEDSICON 2011.

( DR.N.K.MOHANTY )  
ADDL.DG & MEDICAL SUPDT.



# MEDSICON 2011

World Student Medical Congress

*18<sup>th</sup> & 19<sup>th</sup> August 2011*

Vardhman Mahavir Medical College &  
Safdarjung Hospital, New Delhi, INDIA



**Dr. V.K. Sharma**  
**Patron**  
**MEDSICON 2011**

## Message

It gives me great pleasure that MEDSICON 2011, a Young Researcher's Conference is being organized at Vardhman Mahavir Medical College, Safdarjung Hospital.

This conference will provide the necessary platform for young researcher's to share their ideas with eminent National and International faculty.

I would like to thank Dr. Chintamani and his team of enthusiastic students in this endeavour of theirs.

Wishing MEDSICON 2011 all the very best.

Dr. V. K Sharma  
Principal  
VMMC, SJH



## CD Tripathi Message



# MEDSICON 11

World Student Medical Congress

18<sup>th</sup> & 19<sup>th</sup> August 2011

Vardhman Mahavir Medical College &  
Safdarjung Hospital, New Delhi, INDIA



**Dr. Chintamani**  
**Organising Chairman**  
**MEDSICON 2011**

## Message

"Future belongs to those who believe in the beauty of their dreams"

- Eleanor Roosevelt

MEDSICON 2011 is yet another dream that we wanted to realize along with many other dreamers in the form of young researchers from across the globe. As a teacher there is never a greater moment than to see one's students excel as wonderful human beings and minds that make a difference. Quoting Mahatma Gandhi "Be the change that you wish make in the world." The spirit behind this academic/ scientific endeavour is to heal the world with the power of one's wisdom. I did not mention knowledge deliberately as wisdom rather than raw knowledge leads to completion of a human being. Quoting Rigveda "Share your knowledge for that is the only way to immortality." This platform is for all the scientific minds to come and share not only their information, wisdom, but also their ignorance. Quoting Gautama Buddha "Never stop questioning." To be able to ask relevant and useful questions one does not only require the curiosity of a scientific mind but also the blessings of almighty and the guru. This platform has been extended to bring together the teacher and students for an interactive scientific feast. The debates and the JAM sessions have been given their due place for the young and impressionable mind to learn to question. As is often said "Always is always wrong in science", one has to learn from the information and ignorance of others too. This conference is aimed at bringing that flexibility in the minds of young scientists

I would like to extend my gratitude to our Chief Patron, Additional Director General Health Services and Medical Superintendent, Dr. N K Mohanty for being extremely kind and encouraging in making this event happen. He is an academician par excellence and is always encouraging the academic activities which would benefit the students, patients and the mankind in general. Prof. VK Sharma, our principal and patron has been very kind and encouraging in most academic activities happening in the college, I extend my heartfelt gratitude to him. Prof. CD Tripathi the vice principal has been a pillar of support in organizing this mega event. I am grateful for his kind encouragement from time to time.

A teacher is only as good as his students and it makes me proud to mention the contributions of some of my students especially Dr. Rohan Khandelwal, who I have seen grow up as an exceptional professional and a human being. He has been associated with me in various previous scientific endeavors and has been my shadow. My very dear student, Dr. Megha, who has worked out of her skin to make this a successful event. I would like to appreciate the efforts of Krishna Adit Agarwal, who was instrumental in conceptualizing this event. I would also like to appreciate the efforts of Dr. Shailendra and Dr. Yashavantha for their active contribution. I would also like to mention the contribution of all the other members of the organizing committee for making this event a possibility.

Finally dear delegates this conference is about you, for you and for the good of all students across the country and the globe, therefore your participation is deeply appreciated. We are looking forward to a memorable MEDSICON 2011.

May god bless us all with all the wisdom and happiness.



# MEDSICON 11

World Student Medical Congress

18<sup>th</sup> & 19<sup>th</sup> August 2011

Vardhman Mahavir Medical College &  
Safdarjung Hospital, New Delhi, INDIA



**Dr. Rohan Khandelwal**  
**Organising Secretary**  
**MEDSICON 2011**

## Message

Ever since I attended an International Medical Student's Congress at Cairo in 2006, I wanted to be a part of a similar event in India. I am thankful to Dr. Chintamani, my guide and mentor, for taking this initiative to organise MEDSICON 2011 - a conference for young researchers. It is a matter of great joy that this event is being held at the institute where I started my medical journey, Vardhman Mahavir Medical College, Safdarjung Hospital.

This conference has been designed to cater to the needs of budding researchers in all fields of science and will provide them with an excellent platform to share their ideas with eminent faculty from all over the world. In today's competitive world, it is necessary to keep pace with the ever changing technology and advancements and this event will help students stay up to date with the latest advances in the field of science and medicine. The workshops planned will help them enhance their technical skills and working in the wards. The symposium on "How to write a scientific paper and get it published" is another highlight of this conference and is necessary in today's world of evidence based medicine, where the dictum of "Publish or Perish" holds true.

I wish to express my gratitude to the Medical Superintendent, Principal and Vice Principal of VMMC and SJH for providing us with the necessary facilities and support to organise this event.

I am sure delegates from all over the world would enjoy this academic entertainment and would go back with new ideas in mind which will help them "Heal the world".



Rohan Khandelwal  
Organising Secretary  
MEDSICON 2011



# MEDSICON 11

World Student Medical Congress

18<sup>th</sup> & 19<sup>th</sup> August 2011

Vardhman Mahavir Medical College &  
Safdarjung Hospital, New Delhi, INDIA



Krishna Adit Agarwal  
Organising Secretary  
MEDSICON 2011

## Message

It is my great honour and pleasure to welcome you all to this World Student Medical Congress, the first of its kind Medical Students' International Conference, MEDSICON 2011 being held at our institution. I would first like to thank Dr. Chintamani for giving me the opportunity to be a part of this mega event. Having a mentor like him is a great blessing. As an undergraduate I have always been fascinated by my seniors who present their research work at various conferences and, at the same time, felt the need of a platform for undergraduates and postgraduates, students from every branch of science, to participate and share their own research ideas with the world. This conference aims to provide the much-needed platform for students from all over the world. I sincerely hope that students would share their research experiences among themselves and seek the guidance of experienced researchers in their learning process.

I would like to thank and congratulate the entire Organising Team of MEDSICON 2011 for putting up an excellent show.

With Best of Regards,



Organising Secretary  
MEDSICON 2011

# Qualitative and quantitative dermatoglyphic traits in patients with breast cancer: a prospective clinical study

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Study Abstract: Background

Breast cancer is one of the most extensively studied cancers and its genetic basis is well established. Dermatoglyphic traits are formed under genetic control and represent the genetic makeup of an individual and therefore his/her predisposition to certain diseases like Down's syndrome and Klinefelter syndrome. The prints can thus represent a non-invasive anatomical marker of breast cancer risk and thus facilitate early detection and treatment.

## Methods

The study was conducted on 200 histopathologically confirmed breast cancer patients and their digital dermatoglyphic patterns were studied to assess their association with the type and onset of breast cancer. Simultaneously 60 age-matched controls were also selected that had no self or familial history of a diagnosed breast cancer and the observations were recorded. The differences of qualitative (dermatoglyphic patterns) data were tested for their significance using the chi-square test, and for quantitative (ridge counts and pattern intensity index) data using the t- test.

## Results

It was observed that six or more whorls in the finger print pattern were statistically significant among the cancer patients as

compared to controls. It was also seen that whorls in the right ring finger and right little finger were found increased among the cases as compared to controls. The differences between mean pattern intensity index of cases and controls were found to be statistically significant.

## Conclusions

Such dermatoglyphic studies might help us to identify the possibility of breast cancer in Selective non-symptomatic women (positive family history) and to detect the earliest changes associated with tumorigenesis

So that appropriate preventive measures concerning the environmental factors and particularly the hormonal factors could be taken. Women at a high risk of breast cancer would have many options available to them including prophylactic mastectomy, watchful waiting, and chemoprevention if the risk could be assessed accurately.

The study is ongoing and the pattern seems to be appearing wherein a definite approach in the form of "dermatoglyphics" might play a significant role in the near future not only for the purpose of screening but also for studying the behavior of breast cancer.

## Study of testosterone levels in male type 2 diabetes mellitus patients

Aastha Munjal

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Diabetes Mellitus has now reached an epidemic population in India. Around 50.8 million people in India are suffering from type 2 diabetes. This constitutes the world's largest diabetes population, and hence India is also labeled the "World Capital of Diabetes".

In developing countries, unfortunately by the time type 2 diabetes is recognized, diagnosis confers neither predictive nor protective benefit because most men have often developed advanced micro and macro vascular complications leading to exponential rise in morbidity.

A condition seen associated commonly with diabetes is secondary hypogonadism. However, it is unclear whether hypogonadism contributes to type II diabetes, or vice versa. The common thread linking these two diseases could be Insulin Resistance which is an important feature of type 2 diabetes. A significant inverse relationship exists between testosterone levels and insulin concentrations in healthy men.

This research is an effort to come up with a simple blood test to measure the testosterone levels in type 2 diabetics as a significantly low testosterone level can serve as a prognostic indicator of the severity of diabetes mellitus type 2.

### Material and Methods

This was a cross-sectional study in which 60 patients were enrolled for the study and divided into two groups, diabetics and the controls. Appropriate clinical history and ADAM questionnaire was filled and Serum testosterone levels were measured. All the

data obtained was recorded systematically & analyzed using standardized statistical softwares and Students' unpaired t-test and chi-square tests were applied.

### Results

Low testosterone values were seen in 53% diabetic men and 7% of non-diabetic men.

There was a significant negative correlation between age and total testosterone levels ( $p = 0.042$ ).

Also, association between androgen deficiency and multiple risk factors, including obesity, family history of diabetes mellitus, ageing, and autonomic neuropathy was observed.

### Conclusions

There exists a high prevalence of symptomatic hypogonadism in men with type 2 diabetes. An age-related fall in total testosterone levels both in diabetic and non-diabetic men but the prevalence of hypogonadism was significantly more in type 2 diabetes mellitus patients compared to their normal counterparts suggesting that metabolic derangements in type 2 diabetes mellitus have a strong association with low testosterone levels seen in such patients.

Hence, the development of diabetes mellitus can be predicted by a simple blood test measuring testosterone levels, although, clinical diagnosis of hypogonadism in diabetics solely rests on history and examination. Serum testosterone levels can serve as a simple

indicator to screen the diabetic patients for an early aggressive treatment modality to limit the inevitable complications of the disease. Testosterone replacement therapy as well as lifestyle modifications with regard to diet and exercise may synergistically slow or halt the

progression of type 2 diabetes, cardiovascular disease, and erectile dysfunction. However, larger studies are required to establish the benefit of testosterone replacement therapy on quality of life and the diabetic state in men.



## To evaluate the knowledge, attitude, awareness and practice of emergency

**Aayushi Rathore**

LHMC, New Delhi

### Patients and methods

100 women aged between 18 to 45 years visiting antenatal clinic at Smt Sucheta Kripalani Hospital, Delhi were interviewed and responses entered in a specially designed questionnaire of knowledge, attitude and practices of emergency contraceptive pills.

### Results

The study was conducted on 100 women out of which 72 were in 18-25 yrs, 26 in 26-35 yrs and 2 in 36-45 yrs age group. The mean age of the group was 24.67 years. 86 of them were hindu. 14% of them were illiterate. 52% women had no living children. 26 women admitted to having abortion previously out of which 5 (19.23%) were induced abortions. 32% of the women had used contraception earlier out of which condom was the most popular method (56.3%) followed by oral contraceptive pills (9.4%) and 31.2% of the women had used two or more methods of contraception. 74% of the women had heard about EC and only 6 (8.1%) of them had ever used it. None of them knew that IUD can be used for

emergency contraception. 46 (62.2%) out of those who had knowledge about EC knew the correct timing of its use. The source of knowledge in majority of them (77%) had been the electronic media (television) followed by friend or relative (18.9%). 66.2% of the women thought of electronic media (television) as the method to give information to the people about EC. Majority of them (63.5%) knew that it was available at the pharmacy. 25.7% of the women had concerns about its use. 59.5% of the women would recommend it to a friend in need and 54.1% agreed to use it in the future.

### Conclusions

Although awareness of emergency contraception is at an apparent level the rate of using the method is at a very low level. Health facilitator should educate the masses about EC, emphasizing knowledge about the available methods, correct timing, action and side effects of EC which may act as a barrier to its use in the event of unprotected sexual intercourse.



# **A study of the nasal carriage of *Staphylococcus aureus* with special reference to Methicillin Resistant *Staphylococcus aureus* among medical students studying in Maulana Azad Medical College, New Delhi**

**Akanksha Agarwal**  
Mamc, New Delhi

## **Abstract**

disc method.

## **OBJECTIVES**

To find the rate of nasal carriage of *Staphylococcus aureus* with special reference to MRSA among the medical students.

## **METHODS**

Nasal swabs from each anterior nare were taken from all the 50 study subjects and subjected to various conventional isolation and identification methods. All aerobic bacterial isolates obtained were then subjected to antimicrobial susceptibility tests by disc diffusion method employing the Modified Stoke's technique against a wide range of antimicrobial agents. All the isolates of *Staphylococcus aureus* were screened for MRSA by Cefoxitin

## **RESULTS**

Out of the 50 isolates, 15(30%) were those of *Staphylococcus aureus* and of these 15, 2 (4%) were found to be MRSA and the rest 13 (26%) were MSSA. All the isolates showed 100% susceptibility to Vancomycin, Teicoplanin, Amikacin, Linezolid and Mupirocin.

## **CONCLUSION**

The nasal carriage of *Staphylococcus aureus* was found in 30 % of the study subjects, more in males, and 53% of the positive subjects had used antibiotics within past 3 months.

## Cross-sectional study on the use of social network sites and health profile of its users between the age group of 18 to 24 from Delhi

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### Introduction

A Social Network Service (SNS) is an online site that focuses on building of social relations among people. Facebook, Myspace, LinkedIn, Friendster, Orkut, Twitter, Classmate, Yahoo 360 are the top such sites[1]

Created by Mark Zuckerberg with Eduardo Saverin, launched in February 2004, facebook has more than 500 million active users as of July 2010. A January 2009 Compete.com study ranked Facebook as the most used SNS by worldwide monthly active users followed by MySpace.[2]. More than 150 million active users access Facebook through mobile devices across 200 mobile operators in 60 countries. [2]

Number of facebook users in India is 13188580 with male and female users being 9344040 and 3914100 respectively. The penetration of facebook in India to online population is 16.28%. The major number of users belong to age group 18 to 24 comprising 46% of total population.[3] Research shows that facebook use is associated with moderate to severe

depression. Dr Catriona Morrison says "While many of us use the Internet to pay bills, shop and send emails, there is a small subset of the population who find it hard to control how much time they spend online, to the point where it interferes

with their daily activities." [4] A study by Dr. Joanne Davila on a group of 13 year old girls showed they can be prone to anxiety and depression by talking too much to their friends through

texting, e-mailing, and social networking. Repeated conversations among adolescent girls known as co-rumination can be unhelpful particularly if it's associated with romantic disappointments.[5]

Dr Aric Sigman says, lack of "real" social networking, involving face-to-face interaction, may have wide-ranging biological effects, it could alter the way genes work, upset immune responses, hormone levels and the function of arteries, and influence mental performance increasing the risk of health problems as serious as cancer, strokes, heart disease and dementia. It's probably an evolutionary mechanism that recognises the benefits of us being together geographically". [6] Susan Greenfield told The Daily Mail: "My fear is that these technologies are infantilizing the brain into the state of small children who are attracted by buzzing noises and bright lights, who have a small attention span and who live for the moment". [7] The extensive usage of these sites is causing the Indians too find difficulty in balancing between their 'real life' and 'online life'. Questions like, How much exposure is healthy? Are the adolescents acting responsible for themselves and for their family? are being raised. This addiction is virtually same as to nicotine or heroin as Facebook Depression and Facebook Anxiety Disorder (FAD) [8] come into picture. Studies on SNS is in nascent stage in India. In order to find out what could be the future implications of the use of SNS by young population on their health and well being, current study has been planned.

## Objectives

1) To study the pattern of use of social networking sites amongst population aged 18 to 24 years from Delhi.

2) To find out the prevalence of anxiety and Obsessive-Compulsive Disorder amongst the users of social networking sites in the age group of 18 to 24 years from Delhi.

## Methodology

1) STUDY DESIGN - A cross-sectional study.

2) STUDY POPULATION - College going students between the age group of 18 to 24 from South Delhi. A list of all the colleges from South Delhi will be prepared and then colleges will be picked up for the purpose of study using simple random method of sampling technique. Every 10th student from the college will be picked up till we get a sample of 50 per college. Permission will be sought from administrative heads of those colleges to conduct the study.

3) Study Period - 3 months

4) Sample size - The prevalence rate of usage of Social Network Sites is 46% in Indians belonging to the age group 18 to 24. The size was calculated using the formula:  $4pq/L^2$  (p=prevalence rate, q=1-p, L=10% is the relative precision). The sample size was calculated to be 470.

5) Selection criteria - All these are the college students of South Delhi in the age of 18 to 24.

Exclusion Criteria - Those who do not consent to participate in the study.

6) Instruments used -

Self administered, semi structured questionnaires will be distributed to the participants that will help us access their pattern of use of SNS. We will access the prevalence of anxiety by using Hamilton Rating Scale for Anxiety (HAMA), 14 item scale.[9]

Also the individuals will be asked about their obsessive compulsive habits towards SNS including questions about the amount of time they spend on SNS, how much impairment or distress they experience, and how much

resistance and control they have over the thoughts related. As well, the same types of questions are asked about compulsions. This will be analysed using Yale Brown Obsessive Compulsive Scale (Y-BOCS), a 10 item scale.[10]

Also a questionnaire will be administered to illicit the medical history of the participants related to their general physical state, the treatment history etc. if there had been any deterioration in eyesight, weight loss, weight gain, finger and wrist joint pain, back ache, blood pressure since they started the use of these sites. Body Mass Index (BMI) will be calculated by the standard formula = weight/(height)<sup>2</sup>, the unit being kg/m<sup>2</sup> of BMI of all the participants to draw a relationship between the SNS site use and weight issues.

7) Plan of Analysis and Statistical tools - Data will be entered in Microsoft Excel sheets. The data will be analysed using statistical package software tools. Mean, proportions and percentages will be calculated. Simple and cross tables will be made and appropriate test of significance will be applied (eg. t test, Chi square test). Also data will be represented using appropriate diagrams (bar, charts) to illustrate the result. The questionnaire will comprise of the following Annexures:

### Annexure 1

Part 1 - Socio Demographic Profile and personal details of the participants

Part 2 - Pattern of the usage of SNS.

Part 3 - Questions about their medical history and general physical state.

### Annexure 2

Questions to access their Anxiety level using Hamilton Anxiety Scale (HAM-A).

### Annexure 3

Questions to access the OCD prevalence in them using Y-BOCS scale.

Consent will be taken and personal information will be kept strictly confidential.

## Implications

Information, Education, Communication activities in the form of sensitisation programmes should be introduced both for the faculty and students of both colleges and schools to sensitize them regarding the wiser use of various SNS and internet on the whole. Also more studies should be done at a larger scale in the country so that not only do we get a data base for technology that has become so popular but also empower the population of young responsible adults to safeguard themselves against possible health adverse effects as the country's development and economy depends on their health.

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## BREAST FEEDING PATTERNS IN GENITAL CANCERS: AN EPIDEMIOLOGICAL REVIEW

**Amita Tuteja**

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### **Abstract**

Lactation results in a number of physiological adaptations which exert direct effects on maternal health, some of which may confer both short and long term advantages for breast feeding mothers. It delays the return of ovulation and significantly reduces fertility during the period of lactational amenorrhoea. This process is linked with feeding patterns and may therefore be affected by practices such as scheduled feedings and the timing of introduction of complementary foods. While the evidence from epidemiologic studies is mixed, several large studies have shown that extended lactation is associated with reduced risk of premenopausal breast, ovarian and endome-

trial cancers.

Our study reveals that almost half of ovarian cancer patients had never breastfed. Data was collected regarding cumulative breast feeding duration, months of breast feeding per pregnancy, years since the mother's first and last lactation, age at first lactation, complimentary feeding characteristics such as type of milk used, age of weaning & problems associated. Further studies with larger sample size are needed for careful consideration of how such practices affect genital malignancies.

# MENOPAUSAL OSTEOPOROSIS: PERSPECTIVES AND TREATMENT OF INDIAN WOMEN IN A TERTIARY CARE HOSPITAL

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## Abstract

### BACKGROUND

Osteoporosis, a highly prevalent skeletal disorder, predisposes individuals to an increased risk of fracture. Postmenopausal women are at higher risk for developing osteoporosis and osteoporosis-related fractures. Osteoporotic fractures are commonly asymptomatic, necessitating a need for proactive screening, diagnostic testing, and therapeutic interventions to reduce the risk of fractures in at-risk patients.

### AIMS AND OBJECTIVES

To study the full spectrum of musculoskeletal symptoms in women attending postmenopausal clinic & individualize their management.

### STUDY DESIGN

Longitudinal prospective open study

**STUDY SUBJECTS :** n =100

### METHODOLOGY

Data related to their demographic profile, symptom array, attitudes and perception about osteoporosis, examination findings were

noted. Hormonal, metabolic and bone mineral density parameters were collected wherever possible for risk assessment and start treatment. Analysis was done using appropriate statistical tools.

### RESULTS

The mean age of menopause was found to be 46-50 years and most women presented after 5 years of menopause. The commonest musculoskeletal symptoms were backache, diffuse joint pains & generalized bodyache. Osteoporosis and osteopenia was found in 25% of patients. Only 20% were following a healthy life style. All women were started on lifestyle modifications, calcium & calcitriol supplementation. Bisphosphonates were started weekly for women with osteoporosis and osteopenia. The study provides a one year follow up of all enrolled women.

### CONCLUSIONS

The effect of menopause is apparent across several domains of a woman's life. Necessary steps are needed for sensitization and early start of treatment to prevent long term complication of osteopenia and osteoporosis. The high morbidity in symptomatic patients highlights the need for collaborative clinics to fulfill the needs of menopausal women.



# Evaluation of Surgical site infections in relation to risk factors and prophylactic use of antibiotics

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## Abstract

antibiotic susceptibility were done as per CLSI Guidelines (2002, 2008).

## BACKGROUND

Despite improvements in prevention, Surgical site infections remain a significant clinical problem as they are associated with substantial mortality and morbidity and impose severe demands on healthcare resources. With the objective of evaluating the surgical site infections in different classes of wounds in Safdarjung Hospital and compare them with the expected international standards, to understand the risk factors associated with them and to study the microbiological profile, a study was conducted during the period (10 June 2010 to 8 August 2010).

## METHODS

All general surgery patients who underwent surgery during the specified period were included in the study. Demographic details, clinical history and other relevant details (potentially modifiable risk factors, treatment records, follow up records, ASA score). NNIS score was computed for each participant. Participants were surveyed weekly by telephone and OPD visits for 30 days from the date of surgery. Patients with surgical site infections were managed as per standard protocol. Wound swab/pus sample and other appropriate samples were collected and processed. Identification of bacteria and

## RESULTS

A total of 100 patients (50 elective and 50 emergency) were included in the study. Patients were classified by wound class as per CDC criteria. Of the total patients (n=100) studied, 35% of the patients developed SSI, mortality rate of 2.8%. Infection rate was found to be significantly higher in emergency surgical patients as compared to elective surgical patients ( $p < 0.05$ ). Statistically significant association was noted between presence of drains and development of surgical site infection in patients with Class III wound and between ICU stay and development of surgical site infection in Class III and Class IV wound. Most common bacterial isolate was found to be Klebsiella. Alarming antibiotic resistance patterns were noted.

**CONCLUSION** Infection rates were found to be significantly higher in our hospital (especially Class III and Class IV) when compared to international standards. A wide spectrum of risk factors are associated with SSI. Antibiotic resistance is an increasing problem in SSI. Comparison of data of our hospital to the international benchmarks will help us providing better health care.

## Study of fungal infections in malignant wound : an initial prospective study at a tertiary care centre

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### Abstract

**Background:** In recent years, there has been a global rise of fungal infections in patients with advanced cancer. Apart from *Candida*, other organisms especially non *Candida albicans* spp. (NAC) and *Aspergillus* spp., have become common which were earlier used to be an infrequent cause of fungal infections. With the objective of studying the pattern of fungal infections in malignant wounds, a prospective study was conducted in Safdarjung Hospital.

**Methods:** Cancer patients with clinical suspicion of fungal infection were included. Demographic details and clinical history were documented for each participant. Tissue biopsy and other relevant sample were collected and processed under all aseptic precautions. Identification of yeast, moulds

and bacteria and antifungal susceptibility were done as per CLSI Guidelines (2002, 2008).

### Results

Out of the 30 patients studied, 25 (83.3%) of patients were positive for fungal culture. 56% of patients with positive fungal culture were suffering from carcinoma of the breast. *Candida* was the most common species found (72%).

### Conclusion

Routine assessment, timely detection of the fungal infection and the antifungal susceptibility was crucial for the management of malignant wounds. More data is needed to obtain a clear picture.



# The study of biomarker cytokines (interleukin-6) in oral pre-cancers

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## INTRODUCTION

Pre-cancer is a lesion from which a malignant tumor is presumed to develop in a significant number of instances and that may or may not be recognizable clinically or by microscopic changes in the affected tissue.

Oral squamous-cell carcinoma is thought to be preceded by a number of pre-cancer stages which induce morphological changes in cells of the oral mucosa resulting in clinically detectable pre-malignant lesions such as erythroplakia or leukoplakia.(1)

Erythroplakia is bright red velvety plaques which cannot be characterized clinically or pathologically as due to another condition.

Leukoplakia is whitish patch or plaque that cannot be characterized clinically or pathologically as any other disease and which is not associated with any other physical or chemical causative agent except the use of tobacco.(2)

Oral submucous fibrosis (OSF) is a chronic fibrotic disease, characterized by fibroelastic changes and inflammation of the mucosa.

Melanoplakia is the occurrence of pigmented patches in oral mucous membrane.

Candidiasis is a contagious disease caused by a fungus, *Candida albicans*, characterized by small whitish eruptions on the mouth, throat, and tongue.

Despite the general accessibility of the oral cavity during physical examination, many malignancies are not diagnosed until late stages of disease. In order to prevent malignant transformation of these precursor lesions,

multiple screening and detection techniques have been developed to address this problem. The early detection of cancer is of critical importance because survival rates markedly improve when the oral lesion is identified at an early stage.

## Interleukin-6 (IL-6)

It is an immune protein in the hematopoietins family. It is a monomer of 184 amino acids produced by T-cells, macrophages, and endothelial cells found on a single gene located at 7p21. IL-6 is released in response to infection, burns, trauma, and neoplasia, and its functions range from key roles in acute-phase protein induction to B- and T- cell growth and differentiation. IL-6 can have direct effects on cells, can mediate the effects of other cytokines, can be co-agonistic or antagonistic in conjunction with other cytokines, and interact with glucocorticoids. The intra-tumoral cytokine stimulates oral cancer cells to enhance secretion of matrix metalloproteinase, which promotes angiogenesis and play important role in tumor cell invasion by degrading ECM.[5]

Previous studies related to OSCC have demonstrated that concentration of Interleukin-6 and other pro-inflammatory and pro-angiogenic cytokines are increased.(3)

## OBJECTIVES

This study aims to define the role of Interleukin-6 as salivary biomarkers in early detection of oral squamous cell carcinoma.

1. To study the association between Interleukin-6 and oral precancers.
2. To identify the alteration in Interleukin-6 gene in the saliva of at-risk patients.
3. To assess the Interleukin-6 in salivary samples both quantitatively & qualitatively.
4. To estimate the levels of Interleukin-6 in salivary samples of high risk patients[tobacco abusers in smoked/smokeless form] and compare it with the age matched controls.

## METHODOLOGY

A prospective experimental analysis will be conducted by using 5ml whole saliva expectorated by each individual, who has any of the morphological pre malignant lesion [leukoplakia, erythroplakia, melanoplakia, oral submucous fibrosis, candidiasis] in the oral mucosa, under non stimulatory conditions in the OPD of VMMC & Safdarjung Hospital, New Delhi.

The sample size of 30 such individuals will be taken.

Samples will be obtained by requesting subjects to swallow first, tilt their head forward, and then expectorate all saliva into the centrifuge tube for 10min without swallowing.

Following collection, the saliva will be immediately centrifuged in a cooling centrifuge at 2500rpm for 15min at 4°C to remove squamous cells and cell debris. [4]

The resulting supernatant will be separated into 1ml aliquots and stored at 80°C for further biochemical analysis. [4]

Then, the biomarker Interleukin-6 is analyzed using solid phase sandwiched enzyme linked immuno sorbent assay in laboratory. (4)

The proposed intervention is to use IL-6, if the study becomes favorable, as a biomarker for early detection of oral cancer in high risk patient presenting with precancers.

A written consent form will be signed by each patient after explaining various aspects of the study to the patient.

The patient will be assured and all measures will be taken to maintain the confidentiality of the information given by the patient.

Ethical clearance for this study has been applied for.

## IMPLICATIONS

Given the association between Interleukin-6 and adverse outcomes, identification of high-risk oral premalignant lesions and intervention at premalignant stages could constitute one of the keys to reduce the mortality, morbidity and cost of treatment associated with OSCC. In addition as the molecular changes appear well before microscopic and morphological changes, certain patients, known to be at high risk for oral cancer[tobacco abusers smoked/smokeless] can be diagnosed early. This study will help in the early detection of oral precancers and their transformation into invasive cancers at an early stage by follow up that will last beyond the study.

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## **Retrobulbar haemorrhage: a complication of zygomatico-orbital trauma**

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Retrobulbar haemorrhage is a rare complication of zygomatico-orbital trauma. It occurs mostly due to damage to the infraorbital artery which leads to collection of

blood behind the globe of the eye. It can lead to irreversible loss of vision if not diagnosed and treated promptly. Clinical features and management options available are discussed in this paper.

# COMPLIANCE OF HEALTH WORKERS TO H1N1 VACCINATION

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## Abstract

The Pandemic H1N1/09 virus is a swine origin Influenza A virus subtype H1N1 virus strain responsible for the 2009 flu pandemic. The influenza virus has characteristics of antigenic variation due to antigenic shift and drift. The human race does not have immunity against this new reassorted and novel virus that is why it has potential to spread world wide. Epidemic started in Mexico in March, 2009 spread to whole of world within two months time.

As of 24 May 2010, 10193 cases of swine flu have been confirmed with 1035 deaths. With evidence on the effectiveness of vaccination in the control and prevention of seasonal influenza, vaccination for pandemic influenza is one of the most important primary preventive measures to reduce the disease burden associated with influenza A (H1N1) infection.

Several high risk groups have been identified as "the priority group" to receive the influenza A (H1N1) vaccination and among these, healthcare workers have been identified "as a first priority" to be vaccinated against influenza A (H1N1) by the World Health Organization. Also previous studies that have examined the acceptability of seasonal influenza vaccination among healthcare workers and found low acceptability.

The willingness of the healthcare workers to accept the H1N1 vaccination needs to be assessed. Not only the willingness but their fears about vaccination must be known so that they can be further educated on vaccine and

a good compliance can be obtained.

## OBJECTIVES

1. To study the awareness of health care workers about the H1N1 vaccination.
2. To study the current status H1N1 vaccination
3. To study the willingness of health care workers to accept the vaccination against H1N1.
4. To study the factors associated with their practices for vaccination against H1N1.

## Methodology

Type of study: Cross sectional study

Study Area: The study will be conducted in Maulana Azad Medical College and associated Lok Nayak hospital.

## Sample size

The compliance rate among health workers for H1N1 vaccine was 27% according to previous study done in Hong Kong. So based on this compliance rate taking worst acceptable rate of 17% and at 95% confidence level the sample size for the study came out to be 74.

Study tool: A pre-tested questionnaire will be designed consisting of items on demographic profile, attitude toward vaccination, acceptance of H1N1 and reasons for compliance.

Study Procedure: Proportionate to size health workers from microbiology and medi-

cine departments, casualty and swine flu ward will be selected.

The information collected from individual subjects with the help of questionnaire will be fed in excel and analyzed with the help of Epi-info WHO software package

**Ethical Issues:** All subjects will be informed about the study and their voluntary participation will be sought. The information will be confidential. Subjects will be motivated to get the vaccination according to Government protocol.

### **IMPLICATIONS OF STUDY**

1. H1N1 infection is a public health problem due to its pandemicity. This pandemic can be prevented only by vaccination which is

advocated by WHO and Government of India.

2. It is important to know about their acceptance of vaccination and also reasons for non-compliance. Understanding of various reasons for non-compliance would be useful for designing behavior change communication intervention program so that positive behavior in risk group such as health workers can be instilled.

## **Breastfeeding practices among mothers of children less than 2 yrs attending the OPD in a Tertiary Care center**

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### **Abstract**

#### **Background**

World Health Organization recommends exclusive breastfeeding till 6 months of age. It has been clearly proven that breastfeeding protects children against infections disease, allergies, adult disease and promotes physical, motor-mental development. In addition, it benefits the mother in reducing anemia, breast and ovarian cancers, is cost effective and helps fertility control. Therefore the present study was undertaken at Safdarjung Hospital (an urban care tertiary centre, catering to diverse strata of population both literate and illiterate) to study breast feeding practices among mothers and its correlation, if any, with their literacy.

#### **Methodology**

A cross sectional study involving 200 healthy mothers, of children less than 2 yrs, who attended pediatric outpatient department (OPD), was conducted. Informed consent was taken. Literates refer to those subjects who could read and write their name. Exit interviews were conducted and data was collected using a pre-coded, structured questionnaire. Chi-square test was applied to calculate statistical significance.

### **Results**

In our study population, 73 % and 27 % constituted literates and illiterates with prevalence of on demand breast feeding 95.9 % and 94.4%, respectively. The prevalence of 6 months exclusive and on demand breastfeeding did not vary significantly ( $p > 0.05$ ) with the educational status of mothers. The practice of giving pre-lacteal feeds was significantly more among illiterate mothers ( $p < 0.05$ ) with honey being the most commonly used Pre-lacteal. To a surprise only 28% mothers knew advantages of colostrum. Also the practice of discarding colostrum was significantly higher ( $p < 0.05$ ) among illiterate mother.

### **Conclusion**

The above findings support the need to increase awareness among mothers on the importance of colostrum. Also the myths regarding pre-lacteal feeds should be addressed. This drive may be successfully navigated via formal lactation counseling, infant feeding and management programmes by government and non-government organizations.



# COMPARATIVE STUDY OF CONVENTIONAL OCULOPLASTIC

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## Abstract

**Motivation/problem statement:** Oculoplastic evaluation of patients in OPD is a highly skilled and a demanding procedure which needs meticulous recording of measurements of various oculoplastic parameters. The evaluation has immense bearing on the treatment modality and managing the post operative sequelae. The procedure is done manually which obviates its subjective errors and time consumption which motivated us to pursue an alternative to the current gold standard practice. ImageJ is a public domain, Java-based image processing program developed at the National Institutes of Health. It was developed to solve many image processing and analysis problems, from three-dimensional live-cell imaging, to radiological image processing, multiple imaging system data comparisons to automated hematology systems. Image J is a freeware and easily accessible on the internet and which can be used to analyze and measure various oculoplastic parameters from the photographs of the patients.

## Methods/procedure/approach

A prospective comparative study of oculoplastic evaluation was done in 30 patients using conventional manual method (Group A), photographs of patients from Canon Rebel XS SLR camera (Group B), photographs from 3.2 mp Samsung mobile phone (Group C). Corneal white to white diameter was measured using callipers which was later used as a reference value in the analysis of photographs. Oculoplastic parameters such as horizontal palpebral aperture (HA), vertical palpebral aperture (VA), marginal reflex distance 1 (MRD1) and marginal reflex distance 2 (MRD2), inter canthal distance (ICD) and in-

ter pupillary distance (IPD), outer canthal distance (OCD) were measured in all the patients and were compared between the groups. All photographs in Group B and C were shot with similar and standardized settings.

## Results/findings/product

One way Anova test was done between the groups and all the oculoplastic parameters were compared. The p value of HA, VA, MRD1, MRD2, IPD and ICD was  $>0.05$  and was not statistically significant, the p value of OCD  $< 0.05$  and was statistically significant.

## Conclusion/implications

Image J is an effective and accurate tool which can be used seamlessly in oculoplastic evaluation. This tool also helps in pre operative and long term post operative evaluation of ptosis surgeries and cosmetic eyelid surgeries. This tool helps to objectively evaluate by-passing the observer bias and as can also be used to plan the outcome of cosmetic surgeries. Efforts are underway into developing Image J into an android phone application so that tool can be used on our mobile phones making the process easy.

The western research philosophy says "publish or perish" which has made them to contribute immensely to our medical literature whereas in our subcontinent research takes a backseat in the pretext of humongous patient load in our opds and hospitals. Innovation and generous use of technology in our daily day to day practice can only help to improve our observation and attitude towards scientific research.

## **To assess the factors associated with Low Birth Weight among Neonates delivered at Safdarjung Hospital, New Delhi**

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### **Introduction**

LBW babies carry a higher risk of perinatal and neonatal mortality and morbidity. Many factors affect the duration of gestation and of foetal growth, and thus, the birthweight. They may be related to the infant, the mother or the physical environment. Despite the enormous role of LBW in neonatal mortality and morbidity, no clinical attempt is made to predict the possibility of a LBW neonate. The need to formulate a scale to predict the probability of having a LBW infant in the Indian context was strongly felt and the present study undertaken with the objective to assess the risk factors of LBW and to formulate a scale to predict LBW in the Indian scenario.

### **Objectives**

1. To assess the factors associated with Low Birth Weight
2. To formulate a scale to predict the probability of having a LBW infant

### **Materials and Methods**

- Design – Case-Control Study
- Study tool – Pre- designed Structured Questionnaire, Hospital (Obstetrics and Neonatal) records

- Study sample –Nursery and PNC ward of SJH

- Setting – A Tertiary care teaching hospital
- Sample size –

The Sample size was determined to the power 80 for this unmatched Case-control study by using the incidence of exposure of Risk factors in Cases (LBW) and Controls (non-LBW). A sample size of 250/group or 700/group was arrived upon. Due to feasibility concerns, a sample size of 250 per group i.e 250 cases and 250 controls was agreed upon.

### **Statistical analysis**

Analysis will be done to see:

1. Association of each factor with the outcome (Chi-square Test)
2. Unadjusted Odds Ratio (95% CI) for each factor with the outcome (Binomial LR)
3. Adjusted OR (95% CI) for important factors considered simultaneously ( Multiple LR).

Analysis and Results under processing.



# Audit of buying patterns of drugs from various pharmacies of New Delhi and surrounding rural areas of Haryana

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## BACKGROUND

Self-medication refers to using drugs which have not been prescribed, recommended or controlled by a licensed health care specialist. In recent years there has been an increasing trend in self-medication with non-prescription drugs available in pharmacies and in retail outlets.

## OBJECTIVES

The purpose of the study was to estimate the extent of over the counter buying of non prescription drugs and prescription drugs. And to compare over the counter drug purchasing pattern in urban and rural areas.

## METHODOLOGY

A prospective study was conducted as Exit Interviews with customers at various pharmacy shops across New Delhi and some rural areas of Haryana .The data collected was compiled using MS Excel and represented in a report.

## RESULTS

21.41% of the rural consumers took self medication. In comparison, the proportion of urban consumers who took self medication was only 14.3%.The most frequent class of drugs purchased was NSAIDS (35%) followed by Antibiotics(30%) and Antacids(20%) in rural areas while urban consumers purchased Drugs for Cardiovascular Diseases(25%), Antibiotics(18%) and Oral Hypoglycemic (17%) most commonly.

## CONCLUSIONS

Self medication is more common in rural areas because the population is relatively illiterate and unaware of the health facilities, and get influenced by pharmacists and quacks. Thus, self medication is a "Double Edged" Weapon and it depends upon Authorities, physicians, pharmacists and consumers that how well this principal of medication works for them.

## A Case Report of Malignant Pleural Mesothelioma

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### Abstract

Malignant pleural mesothelioma is a rare malignancy of the pleura, involving a large extent of the pleural cavity. It is associated with a poor prognosis; with an average survival of less than 2 years from diagnosis. There is a strong etiologic correlation between asbestos exposure and pleural mesothelioma, however

unusual presentations are reported, though rarely. The diagnosis is suspected with a chest skiagram and CT Scan and confirmed by a pleural biopsy. Here we are reporting a case of hemorrhagic pleural effusion in a 48 year old male with no history of asbestos exposure. The rarity and implications of this unusual presentation are also discussed.

# Danger signs in pregnancy and determinants of a referral -comparison of a government and private setting

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## Objective

To study the response of pregnant women towards danger signs of obstetric complications attending a government tertiary care and a private hospital in Delhi and its associated factors.

## Study Design

Cross-sectional study. Setting: A government tertiary and a private health care hospital in Delhi. Participants: 200 booked pregnant women visiting antenatal clinics of previous mentioned setting (100 from each).

## Tools

Pre-tested Structured Questionnaire to know patient socioeconomic status, attending government or private setting, availability of conveyance and of reliable attendant and response towards danger signs of obstetric complications.

## Statistical Analysis

Proportion. Results: The study revealed that 29 % of pregnant women will not visit the hospital in emergency when bleeding per vaginum occurs. 32% will consult during

scheduled visits on symptoms of early stage hypertensive disorder symptoms like headache, blurring of vision and swelling of feet or 11 % will even treat by home remedies. However 99% considered fits as critical. Response was significantly poorer in a government setting where paucity of mode of transport 14% , lack of attendant 56% were rampant and low income(45%) were mainly cited . Local dais/ Anganwadi was preferred first referral in government setting by 12 % and self medication was rampant in private setting 34 %.

## Conclusions

A significant proportion of pregnant women will consult late for signs like bleeding per vagina attending government setting. There is a need to offer health promotional campaigns for the prevention of these treatable life-threatening obstetric complications.

## Keywords

Maternal response, signs of obstetric complications, government and private hospital

## Patient and provider delays in breast cancer patients in a developing country-a prospective study

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### INTRODUCTION

Breast cancer is the second most common cancer amongst Indian women and majority cases are still locally advanced at presentation [1]. Majority population in India, like in other developing countries lives in villages and in the rural set up the unregistered medical practitioner (quack!) acts as the gatekeeper to medical services. These quacks, due to lack of understanding of cancers, act as a significant cause of delay in the diagnosis and management of breast cancer patients. Delaying the diagnosis and initiation of treatment is likely to result in tumour progression and a worse prognosis. Two types of delay in diagnosis and treatment of cancer are commonly distinguished: (1) patient delay, which covers the period from first onset of symptoms to first medical consultation; and (2) provider delay, which covers the period from first consultation to definite diagnosis or treatment. [14]

Randomized trials of mammographic screening have provided strong evidence that early diagnosis and treatment of breast cancer can reduce the specific mortality. Moreover, in a recent systematic review of published studies, delays of 3-6 months between the onset of symptoms and treatment have clearly been found to be associated with lower survival rates for breast cancer patients.

Constraints to the timely diagnosis of cancer and access to treatment have been attributed mainly to the characteristics of individual patients, healthcare practitioners, or the healthcare system. The prevailing model of delays in breast cancer diagnosis and

treatment recognizes only two categories of actors or agents (patients and providers) and one set of structures (the healthcare system) [2-4].

### AIMS and OBJECTIVES

This study aims at assessing the patient provider delay in breast cancer patients.

#### *The main objectives of the study are*

To study the extent and nature of provider delay in breast cancer patients.

To study the extent and nature of patient delay in breast cancer cases.?

To study the association between provider delay and stage at diagnosis.

Assessing the factors responsible for patient and provider delay.

### METHOD

An observational cohort study will be conducted by using interviews based on a structured questionnaire regarding the onset of the symptoms, time delay between onset of symptoms and consultation with a doctor, type of doctor consulted, time delay between onset of symptoms and diagnosis. Approximately 30 patients with histologically proven breast carcinoma will be taken. Patient related delay was defined as the period between the onset of symptoms and consultation with a qualified doctor. Provider delays were defined as the period between first consultation and the diagnosis.

**QUESTIONNAIRE****PATIENT'S PARTICULARS**

NAME:

AGE:

SEX:

PERMANENT ADDRESS:

PRESENT ADDRESS:

**SOCIO-ECONOMIC CONDITION**

(according to modified kuppuswamy's socioeconomic status scale)

LITERACY:

Illiterate

Below 10th class

10th class educated

12th class educated

Graduate

Postgraduate

FAMILY:

Nuclear family

Joint family

STAGE OF MALIGNANCY:

Early

Localized

Metastatic

APPEARANCE OF FIRST SYMPTOM:

FIRST VISIT:

Date/Month:

To whom:

Quack/Local practitioner(registered)/  
Government hospital/Specialized Centre/  
Others

**FURTHER REFERRALS**

TIME

Second:

Third:

Fourth:

TIME BETWEEN INITIAL  
PRESENTATION OF SYMPTOMS TO FIRST  
VISIT

TIME BETWEEN DIAGNOSIS TO START  
OF PROPER TREATMENT:

**OUTCOME/FOLLOW UP**

The data collected from questionnaire will be analyzed using SPSS11 version and factors responsible for delayed presentation or presentation as advanced breast cancers would be studied.

A written consent form will be signed by each patient after explaining various aspects of the study to the patient.

Ethical clearance for this study has been applied for.

Patient will be assured and the measures will be taken to maintain the confidentiality of the information given by the patient.

Proposed intervention is to take strict actions against the quacks and also to initiate self-awareness programs among women to increase the knowledge and change the attitude of people towards breast cancer.

**IMPLICATION**

The factors responsible would be analyzed in the light of the Indian scenario would then be utilized in future to reduce the time lapse between cancer reporting and diagnosis. The conclusions drawn would be utilized in the framing of curriculum for training. Influence of provider delay on prognosis will help to minimize these delays.

## Evans Syndrome

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### Abstract

Evans syndrome is an unusual condition characterized by simultaneous or sequential onset of autoimmune hemolytic anemia and immunothrombocytopenic purpura with a positive Direct Coomb's Test, in the absence of a known underlying cause. A defect in humoral and cell-mediated immunity is considered to be the most likely cause of Evans syndrome. A positive Direct Coomb's Test confirms the diagnosis. The disease follows a

chronic relapsing course, and is associated with considerable morbidity and mortality. There have been very few reports of Evans syndrome from the Indian subcontinent. We report a 30-year-old woman with Evans syndrome who presented with life threatening autoimmune hemolytic anemia and thrombocytopenia. We will be discussing the pathogenesis, clinical presentation and treatment results of Evans syndrome.

## Effect of qnr gene on MIC's of Newer Fluoroquinolones in Gram-negative Bacteria

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### Abstract

**Introduction:** Antibacterial resistance is a global public health care concern that is impacted by both human and non human antimicrobial use. The consequences of antimicrobial resistance are particularly important when disease is caused by pathogens that are resistant to antimicrobials considered critically important in the treatment of human disease by the WHO. Fluoroquinolones have been classified as the highest priority drugs by WHO for management of infections due to Enterobacteriaceae.

Fluoroquinolones with expanded spectrum of action, excellent tissue penetration and ease of administration (oral) have made them economical and important drugs for OPD practice. Hence study of resistance mechanism is of great importance in the fight against the spread of resistance genes of this class of drugs.

The mechanism of Fluoroquinolone resistance is not completely understood and until recently the conventional understanding is that clinically relevant resistance to quinolones in Enterobacteriaceae is always considered to be chromosomal in origin caused by mutation(s) in topoisomerase genes (target enzymes) or affecting drug permeation and transmitted only vertically. Recently the discovery of novel plasmid mediated quinolone resistance (PMQR) mechanism has threatened the diagnostic capabilities of routine diagnostic laboratories and increased the chances of possible spread of resistance by horizontal gene transfer. There is paucity of data regarding PMQR mediated qnr gene in India. Hence the present study was undertaken to study the presence of qnr A and S in Indian isolates and the effect of qnr gene on MIC of various Fluoroquinolones.

### Material and methods

Clinical isolates of E.Coli (n=8) with high

level resistance to Fluoroquinolones were screened for qnr A and S. Plasmid DNA was extracted from positive strains and cloned them in pGEMT Easy vector. The cloned plasmid DNA was then transformed into DH10B strain of E.Coli (which were susceptible to Fluoroquinolones).. The plasmids were then isolated from these transformed colonies (to confirm cloning) and PCR screening done. Both DH10B strain of E.Coli and transformed E. coli DH10B with qnr A and B were subjected to MICs against quinolones and newer fluoroquinolones using E-test .

### Results

Both qnrA and S conferred only low level resistance to Fluoroquinolones but remained susceptible to nalidixic acid (NA), suggesting that high level resistance in parent strains was mediated by other mechanisms. Hence NA screening (routinely done for detection of low level resistance for Fluoroquinolones according to CLSI guidelines) cannot be recommended for screening for qnr mediated resistance. Further, the resistance conferred by qnr S was twofold higher than qnr A to all Fluoroquinolones tested.

### Conclusion

Fluoroquinolone resistance is mediated primarily by mutation in target enzymes or permeability is not true and that plasmid mediated mechanisms are prevalent and result in non-classical resistance, which is not detected by phenotypic tests i.e. NA resistance screening and hence under reported. As these elements are spread through plasmid there is an urgent need to detect them by performing MIC to Fluoroquinolones. Further prevention of spread through rational antibiotic use is critical to save this important and useful antibiotic.



## IMPACT OF SLEEP DEPRIVATION ON RECENT MEMORY & MOOD IN MEDICAL COLLEGE STUDENTS

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### Abstract

Sleep is a vital, biological process essential for physical & psychological restoration. Unfortunately, sleep loss due to voluntary bedtime curtailment has become a hallmark of modern society of which the student community forms an important segment. Owing to their hectic schedules, medical students, in particular, are known to have erratic sleep patterns and suffer from sleep disturbances, fatigue and mood changes. Hence, this study was designed to record the incidence of sleep deprivation and its impact on mood disorders and recent memory. A cross-sectional study was conducted among 100 medical college students. The subjects and controls were selected on the basis of a standardized questionnaire on Sleep Pattern and Epworth Sleepiness scale Score. Both groups were administered the DASS 21 questionnaire for assessing mood

disorders while recent memory was tested using the PGI-BBD questionnaire. We observed that 35% of students were sleep deprived. Also, 53% suffered from depression and 64% reported anxiety, both parameters correlating significantly ( $p=0.05$ ) with sleep deprivation. Stress was seen in 59% though only mild stress had a significant correlation with sleep deprivation ( $p=0.05$ ). Recent memory dysfunction was found to be positively linked to disturbances in mild and moderate sleep deprivation. Thus, our study found a large segment of students being sleep deprived and its significant correlation with mood disorders and recent memory disturbances. We hope that these results will create awareness amongst the students of the crucial importance of adequate sleep in stabilizing mood and enhancing their performance.



# Prescription audit of lifestyle modification advice to patients attending special clinics at a tertiary care hospital in Delhi

**Diksha Sabharwal**

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## INTRODUCTION

Chronic diseases such as diabetes and hypertension require lifestyle modifications, in addition to pharmacological interventions. A prescription audit of patients attending diabetic and cardiac OPDs was carried out to check the type of lifestyle modification advice given (Written+verbal/ Verbal/none) and the differences in patients' understanding and compliance with each type of advice.

## MATERIALS AND METHODS

Study was conducted in July 2010 among 104 patients attending Cardiac and Diabetic OPDs at a tertiary level hospital in Delhi. A semi structured questionnaire was designed to conduct exit interview of patients. The questionnaire focussed on type of advice (written+verbal/ verbal/none) given and the compliance and understanding of the patients with respect to each type of advice.

## RESULTS

A total of 104 patients participated in the study (43 Diabetes OPD, 56 Cardiac OPD, and 5 both). It was observed that only a minority of patients were given written prescription advice [Weight Reduction (4.8%), Smoking cessation (17.0%), Alcohol cessation (13.2%), self sugar monitoring (14.6%), Exercise advice (36.5%), Diet advice (45.2%), etc]. It was also observed that in a majority cases, compliance and understanding was significantly better in patients given written+verbal advice as compared to just verbal advice.

## CONCLUSION

Since compliance and understanding is better in patients given a written advice, lifestyle modification advice should preferably be communicated to patients in written along with a verbal explanation.

# Awareness, Knowledge, Attitude and Practice of Blood and Body Fluid Precautions among health care workers in a tertiary hospital

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## Background

Universal precautions are not well understood or implemented by health care practitioners, though crucial in the prevention and transmission of blood-borne pathogens like HIV.

## Objective

To assess knowledge, awareness and compliance of universal precautions among health care workers .

Study design: Cross-sectional Study

Time period: July 2011

## Method

A 25 item self-administered questionnaire was provided to 500 health care workers including medical and nursing students, medical doctors, nurses and porters.

## Results

Of the 500 selected health care workers , 82 % completed the questionnaire. Almost two third all the respondents , though claim to be

knowledgeable about universal precautions , were not aware that recapping , disassembly and inappropriate disposal increases the risk of needle stick injury. Level of awareness was significantly high in those who were employed in the health sector for more than 10 years. Lack of personal protective equipment was the main reason for not following universal precautions . There was a significant statistical relationship between awareness of universal precautions and level of education. More porters , than any other health care workers, reported inadequate knowledge and compliance of use of protective gear.

## Conclusions

Training and education have been found to be of paramount importance for developing awareness and improving adherence to good clinical practice. Non compliance is associated with insufficient resources , workload , forgetfulness and time constraints.

Availability of supplies and regular awareness programs for these standard precautions are the main suggestions for better compliance.

## Comparison of level of stress and menstrual disorders in medical and non medical students

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### OBJECTIVES

To determine the prevalence of menstrual abnormalities and irregularities among medical students and to correlate it with the level of stress perceived by medicos, compared to the same in non medicos.

### METHODS

A case control study was conducted among age matched 50 medical students(cases) and 50 non medical students(control). Each group was administered sets of validated questionnaires evaluating for variations in menstrual pattern such as duration of bleeding period, regularity, dysmenorrhea, pre menstrual tension and level of perceived stress.

### RESULTS

Both groups were similar in baseline characteristics. Significantly higher number

( $p=0.046$ ) of medicos suffered from premenstrual symptoms as compared to non medical students. Medical students also reported higher level of stress ( $p=0.439$ ) and menstrual problems like passage of clots( $p=0.171$ ), missed periods( $p=0.822$ ) and dysmenorrhea( $p=0.840$ ).

### CONCLUSION

The level of professional stress is more in medicos which may be unknowingly manifested as disturbances in menstruation and premenstrual tension. Hence there is an urgent need to increase awareness of these variations, which if undiagnosed and untreated may lead to greater problems such as infertility later on. Further investigation of the biological mechanisms that mediate the stress effect is warranted.

## **Biofilm production by Salmonella species from acute (Enteric Fever) and chronic cases (Cholelithiasis)**

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### **Introduction**

The current study was undertaken to understand the basis of development of carrier state in Salmonella species due to biofilm production and to evaluate their ability to produce exopolysaccharide glycocalyx in vitro. We examined a number of strains of salmonella species recovered from patients with acute (enteric fever, septicemia) and chronic (cholelithiasis with cholecystitis) infections for biofilm production.

### **Methodology**

A total of 26 representative isolates of Salmonella species were analysed from acute and chronic infections from a total of 287 isolates, by random selection. From acute cases blood samples were processed. Samples from chronic cases were gall bladder, bile, and gallstones recovered during cholecystectomy. Gall bladder, bile and gall stones were subjected to complete microbiological and histopathological examination. The isolates were identified by routine biochemical tests and antimicrobial susceptibility was put up using standard

guidelines. The biofilm production was analysed using crystal violet, Ruthenium Red and periodic acid Schiff by light Microscopy. These were also analysed using Confocal scanning microscopy and Transmission electron microscopy.

### **Results**

A total of 26 representative isolates of salmonella species were recovered from acute (enteric fever, septicemia) and chronic (cholelithiasis and cholecystitis) from a total of 387 isolates. These comprised of Salmonella Typhi (23), Salmonella Typhimurium (2), Salmonella ParaTyphi A (1). Out of the total of 26 isolates 12 produced biofilms as detected, at least, by one of the methods of light microscopy, Confocal or Electron microscopy.

### **Conclusions**

Biofilm production by salmonella species on gallstones contribute to establishment chronic carrier state and cholelithiasis. Out of the methods, analysed Electron microscopy is the gold standard for detection of biofilms.

## Spectrum of enteric pathogens in HIV seropositive & HIV seronegative children

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### OBJECTIVES

To identify the various enteropathogens in HIV positive children with and without diarrhea and its correlation with development of diarrheal illness, age and CD4 counts.

### METHODS

Fifty HIV positive children (with or without diarrhea) attending the ART clinic at LNH and 50 HIV negative children admitted in the diarrhea ward at LNH were enrolled in this cross sectional study. Stool samples were examined for enteropathogens by wet mount, staining methods (Gram's & Kinyoun's), culture & ELISA for *Cryptosporidium* antigen and *Clostridium difficile* toxins. Blood (3ml) was collected for CD4 count using FACS.

### RESULTS

Out of 50 HIV positive patients, 18 (36%) children had diarrhea of which 61.5% presented with chronic diarrhea. 27 pathogens were found associated with diarrheal illness which included *Cryptosporidium* (55.5%), *Candida* (27.75%), *Giardia lamblia* (22.2%), *C. difficile* (16.65%) and *Cyclospora* (11.1%). The spectrum of enteropathogens in HIV nega-

tive children with diarrhea included *Candida* (36%), *Cryptosporidium* (14%), *EPEC* (10%), *Ascaris* (6%), *Vibrio* (6%) and *Shigella* (2%). In this study the major cause of diarrheal illness in HIV positive children were opportunistic infections mainly coccidian parasites and fungi. Bacterial pathogens which cause majority of diarrheal illnesses in non HIV infected cases constitute a low burden in the HIV positive group. The diarrheal illness was more in children aged 4-8 years (56%) and with CD4 count less than 500 cells/ $\mu$ l

### CONCLUSIONS

The study group had significantly higher number (68%) of parasitic infections than control group (22%) with coccidian parasites more in study group (46%) than controls (14%). Bacterial pathogens were more in HIV seronegative group (42%) than in study group (18%). Identification of enteropathogens in HIV seropositive patients is important for institution of appropriate therapy and reduction of morbidity and mortality.

## Assessing levels of control of asthma in 4-12 yr attending chest clinic of a tertiary care centre

**Itivrita Goyal**

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### OBJECTIVES

The study was conducted to assess the levels of control of asthma in paediatric patients and study the relationship with various factors to determine the factor/s affecting the control levels.

### METHODS

4-12 year old asthmatic patients attending the chest clinic and on inhaled anti-inflammatory therapy were assessed. NIH guidelines based Asthma Control Test was used which had 4 questions for the child to complete and 3 questions for the parents based on symptoms in past 4 weeks. Patients were categorized into controlled (score  $>19$ ) and uncontrolled (score  $<19$ ) and various factors studied between the two groups. Student t-test was applied and statistically significant difference between the variables was found.

### RESULTS

Out of 39 asthmatics, 25 were controlled and 14 were uncontrolled. Various factors like severity, parental education, inhalational tech-

nique, allergic disorders, compliance and parental smoking which were compared between the two groups only allergic rhinitis showed considerable statistic difference. It was present in 57% of uncontrolled group compared to 28% of controlled, P value = 0.007 and OR = 9.8.

### CONCLUSION

Thus many factors did not show statistically any significance in our study because of the small number of patients that could be enrolled and many of these factors were taken care in the chest clinic by educating the parents about the disease and by training the patients on steps of inhalation technique, by providing MDI and homemade spacers free of cost. The only factor that had statistic difference was allergic rhinitis implying that presence of co morbid factors like allergic rhinitis can make asthma control difficult.

# Quality of life in breast cancer survivors: A questionnaire based assessment at a tertiary care centre

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## INTRODUCTION

Breast cancer is the most common cancer amongst women in the world and is second only to cancer cervix in India .[1-3]

The National Cancer Institute estimates that 12.7% of women born today will be diagnosed with breast cancer during the course of their lifetime. [3, 4]

This cancer can impact patients psychologically as well as organically both before and after treatment in the form of mastectomy and chemo/radio/hormone therapy. With the recent developments in the fields of surgery, chemotherapy, hormone and targeted therapy the disease free survival in breast cancer has been on the increase in the last decade. These survivors are therefore vulnerable to tremendous physical and psychological impact which can manifest as post mastectomy depression, anxiety, shame, and occasional ideas of suicide. Not only does it drastically affect a woman's life but also takes a toll on family's socio-economic status and fabric.

The issue of 'survivorship' now has become an important issue in breast cancer care that demands the investigation of long-term effects of breast cancer diagnosis and its treatments.[5]

WHO defines Quality of Life (QOL) as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex

way by the person's physical health, psychological state, and personal beliefs.[6]

Nevertheless, the potential psychological, sexual and physical dysfunction caused by both the diagnosis and treatments can have a deleterious impact on the quality of a woman's life. The range of possible treatments may have similar outcomes in terms of response and survival, but can produce very different effects on emotional well-being. Therefore, monitoring quality of life in breast cancer should be a mandatory part of follow-up in clinical trials. There are limited, if any studies conducted in the developing world to assess the QOL issues in breast cancer survivors.

## OBJECTIVES

The study would be conducted in collaboration of Institute of Pathology ,Indian Council Of Medical Research VMMC, Safdarjung Hospital New Delhi with an aim to analyze various parameters of quality of life amongst long-term survivors of breast cancer and to identify the specific aspects of quality of life that were affected in these survivors To assess the long term quality of life {QOL} outcomes in disease free breast cancer survivors. To analyse factors responsible for the quality of life related issues like joint family, literacy levels, the type of surgery and the type of adjuvant therapy.

To elicit various psychosocial, existential, rehabilitation concerns amongst disease free breast cancer survivors.



## METHODOLOGY

An observational cohort study will be conducted through interviews and questionnaire to assess quality of life on parameters of physical and psychological health, social relationships, and environmental wellbeing amongst women that were diagnosed with invasive breast cancer or ductal carcinoma in situ at least 5 years before June 30, 2011 and were enrolled at Safdarjung Hospital, New Delhi.

A sample size of 30 such women will be taken. Quality of life will be measured using World Health Organisation QOL Questionnaire [WHOQLQ-BREF] [7] and EORTC [8] breast cancer supplementary measure (QLQ-BR23).

The data from questionnaire and interviews will be then analysed to score and code for various facets of quality of life (e.g. positive feelings, social support, and financial resources), scores relating to larger domains (e.g. physical, psychological, social relationships) and a score relating to overall quality of life and general health. [9]

The proposed intervention is to create breast cancer support groups and arrange doctor counselling sessions to make the survivors realise that cancer is presentable and curable and to motivate them to join the main stream.

A written consent form will be signed by each patient after explaining various aspects of the study to the patient.

The patient will be assured and all measures will be taken to maintain the confidentiality of the information given by the patient.

Ethical clearance for this study has been applied for.

## IMPLICATIONS

Data derived from the study of quality of life will be important for women newly diagnosed with breast cancer, survivors, and

health care providers (including primary care physicians). It can be used to assist the doctor and patient in decision-making about the treatment options. The study will attract the concern of related people on the specific medical and psychosocial needs of breast cancer survivors in order to be able to identify those patients who might benefit from psychosocial interventions and also design appropriate intervention methods. The study is likely to highlight the long term effects of CA breast treatment and would serve as a pilot study to evaluate the effects. This will help us find 'Indian solutions to Indian problem'

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# EFFECT OF FICUS BENGALENSIS ON ANIMAL MODELS OF NOCICEPTIVE BEHAVIOUR

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## OBJECTIVES

We conducted this study to investigate the analgesic effect of aqueous bark extract *Ficus bengalensis* (FBE) on animal models of pain and to compare it with morphine.

## METHODS

In this study, Tail flick test and Formalin test were done on Swiss albino mice. There were 5 groups (n=8) for each test (control, FBE100, FBE200 and FBE400mg/kg and morphine 5mg/kg i.p group). The extract was administered per orally 1hr before conducting the experiment. In group 5, morphine was administered intraperitoneally 0.5 hr prior to the administration of formalin into the subplantar surface of right hind paw. Normal saline was administered to the control group.

## RESULTS

Tail flick test (measured as increase in the time elapsed till the animal flicked its tail from

the source of the thermal stimuli) showed significant analgesic effect of FBE with  $p < 0.05$ , at a dose of 100mg/kg and is highly significant ( $p < 0.001$ ) at doses of 200 mg/kg and 400 mg/kg as compared to control group. In the Formalin test (measured as decrease in the duration of licking response), FBE in a dose of 400mg/kg has shown results that are comparable to morphine (5mg/kg i.p) treated group, in both phases of the test.

## CONCLUSION

This study can help in developing a drug that is highly effective, safer and compliant as compared to the other analgesics used today. FBE is a promising analgesic agent and may be useful in the treatment of painful conditions and diseases.

## **A study of fixed dose combination preparations of nutritional supplements with specific reference to iron containing preparations: assessment of rationality**

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### **OBJECTIVES**

Given the large number of nutritional supplements available in the Indian market and being one of the most prescribed drugs this study was conducted to analyse and assess these drugs and rationality of the same.

### **METHODS**

Analysis of drug formulations enlisted under the category of nutritional supplements, under the subheading of vitamins, iron, zinc and tonics in the Drug Today was carried out for their dosage form, banned combinations, evidence of efficacy, cost, individual constituents and their amount per unit.

### **RESULTS**

There were 2620 preparations categorized under nutritional supplements of which 2081 were found under vitamins, minerals and tonics with FDCs constituting 84.07%, 92.94% and 100% share respectively. The number of constituents in single preparation were found to

be high with highest being 30. Banned combinations were found in 33%, 14% and 69% under each of the above category. Under the category of vitamins only 34% and 12% of formulations were found to be adhering to therapeutic and prophylactic range of vitamins respectively and only 30% of those also containing minerals fell within their RDA. Among iron preparations 97% were found to be FDC with maximum no of constituent being 20 of which only 23% preparations had minerals falling within RDA. 59% of all the preparations scored 5 or less on the rationality scale.

### **CONCLUSIONS**

Majority of the drugs were FDCs consisting of irrational drug combinations either in the form of banned drug combinations or preparations with unproven. Most of the vitamin preparations are not suitable for prophylactic use. There are a large number of "me too" preparations. There is large heterogeneity in the amount of minerals in the formulations, mostly not abiding with their RDA. The costs of formulations are relatively high.

## **Reverse carotid blood flow: As a complication to administration of local anaesthesia**

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Administration of local anaesthesia is a common procedure for most of the dental surgical procedures. As the maxillary artery (branch of external carotid artery) is the principal artery that supplies the facial region, it lies in close proximity to the site of administration of local anaesthesia. Local

anesthetic agents when injected inadvertently into a branch of the external carotid artery, may enter the cerebral circulation, most likely through a retrograde flow into the common and then internal carotid arteries leading to toxic manifestations.

# Knowledge and Practices of Diet during Pregnancy among patients attending Ante-natal Care Clinic of Safdarjung Hospital

Avantika

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## INTRODUCTION

Maternal nutrition plays a deciding role in the progression of pregnancy and the health of the newborn. If the mother's intake is not sufficient it will limit the supply of nutrients to the foetus and may lead to foetal malnutrition. Fe deficiency will lead to decreased level of Hb and hence oxygen delivery to the foetus. Deficiency of folate is known to lead to neural tube defects. Hence nutrition requires special attention during pregnancy, particularly during the second and third trimesters. Unlike heredity or pre-existing conditions, diet is a modifiable factor and so determination of its knowledge and practices along with the factors affecting these is essential to figure out the lacunae and in finding solutions to them. This study was conducted to assess the knowledge and practices of diet during pregnancy among Indian women coming for regular ante-natal check-ups to the Obstetric OPD of Safdarjung Hospital, New Delhi, India.

## METHODOLOGY

This is a cross-sectional study conducted on 200 pregnant women visiting the ANC clinic

of Safdarjung Hospital. A semi-structured interview schedule was developed for the study. The questionnaire consists of questions related to the demographic data, obstetric history, socio economic status, knowledge and practices about dietary habits during pregnancy. Data was collected by the investigators by personal interview using the semi-structured interview questionnaire. Microsoft Excel was used to analyse the results.

## RESULTS

The average age of women was 23.8 +/- 3.3 years with 97% subjects between 18-30 years of age. It ranges from 19-36 years. The average age at marriage was 20 +/- 2.3 years. It ranges from 16-28 years. Only 15.5% of the females were illiterate. Most (96%) were housewives. Most (44%) of them belonged to the lower middle class according to modified Kuppuswamy SES Scale. 76% of the pregnant females were anaemic (Hb<11g/dL). Other results will be depicted graphically in the complete presentation.

## A Randomized Controlled Trial to assess the role of Curcumin in patients receiving neo-adjuvant chemotherapy for breast cancer

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Curcumin is a natural yellow-pigmented polyphenol component of the spice turmeric, which is derived from the roots of the plant *Curcuma longa* plant, indigenous to Southeast Asia. The coloring & flavoring properties of Curcumin (difeuloyl methane) have led to its wide use as a dietary additive in a variety of foods. Extracts containing Curcumin have also been used in traditional Indian medicines for generations & have been useful in treatment of inflammation, skin wounds, cough, coryza & certain tumors.

Curcuminoids inhibit the generation & propagation of free radicals and act as an antioxidant, inhibiting lipid peroxidation and oxidative DNA damage. The anti-inflammatory property of Curcuminoids have been attributed to the inhibition of lipo-oxygenase and cyclooxygenase resulting in decreased arachidonic acid release and metabolism, along with the property to inhibit activation of NF- $\kappa$ B.

The role of Curcumin has been studied extensively in breast cancer lines, where it has been able to induce cell cycle arrest & apoptosis by inhibiting cyclin-dependent kinase (cdk) activity, suppressing cyclin D1 and cyclin E expression, increasing levels of cdk inhibitors p21 and p27, and inducing p53 transcriptional activity. Majority of Curcumin's effects have been attributed to its ability to inhibit transcriptional activity of nuclear factor kappa B (NF- $\kappa$ B), leading to reduced expression of anti-apoptotic, proliferative, pro-angiogenic, and metastatic target genes of NF- $\kappa$ B, with subsequent inhibition of mammary tum-

origenesis and metastasis in vivo. Importantly, apoptosis in response to Curcumin appears to be far more pronounced in cancer cell lines versus non-tumorigenic breast epithelial cells.

With this background a prospective randomized control trial is being contemplated to assess the role of Curcumin in altering the response to NACT in patients with locally advanced breast carcinoma.

### Materials & Methods

A prospective randomized control trial is being contemplated at the Department of Surgery, Vardhman Mahavir Medical College & Safdarjung Hospital, to assess the role of Curcumin in altering the response to anthracycline based neo-adjuvant chemotherapy (NACT) in patients of locally advanced breast carcinoma (LABC). 100 histopathologically proven LABC patients would be included in the study after informed consent & would be randomized into two groups based on random numbers. The study group would receive oral supplementation of Curcumin along with NACT (CAF regime), whereas the control group would receive a placebo along with the NACT regime. The response to NACT would be evaluated by RECIST (Response Evaluation Criteria in Solid Tumors) criteria, after three cycles of NACT using an MRI. Statistical analysis would be carried out using the SPSS software.

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We have worked out a PCR procedure for identification of different strains of bacterial species from the rhizosphere of soyabean. The technique is more advanced and quick method of identification. It is advantageous over the traditionally used Bergey's manual for distinguishing between different bacterial species, also in this technique inoculation of heterogeneous colonies can be done in place of homogeneous colonies. Root samples of different varieties of soyabean were taken this includes soyabean FYM 50%, soyabean LM 75%, soyabean VC 75%, soyabean FYM 75%, soyabean RDF and soyabean control. The procedure involves firstly, the isolation of the bacterial DNA's and then amplification using

PCR by different primers which amplifies the ribosomal DNA specifically. Amplification using F3/R3 primer and amplified all the bacterial DNA's which were isolated from various samples, Amplification using F1/R1 primer amplified only those bacterial DNA's which were isolated from soyabean FYM 50%, soyabean LM 75% and soyabean control. Amplification using F2/R2 primer amplified only those bacterial DNA's which were isolated from soyabean FYM 50%, soyabean LM 75%, soyabean RDF. The technique described will provide a powerful tool for identification of different bacterial species.



## **To Detect structural renal anomalies and bladder functional abnormalities in children with Down's Syndrome**

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### **OBJECTIVES**

To detect structural renal anomalies and bladder functional abnormalities in children with Down's syndrome. We hypothesized that there will be an increased prevalence of urological malformations in infants with DS. The objective of our study is to include early screening for renal anomalies in all DS infants for timely detection management and intervention of underlying condition.

### **METHODS**

A cross-sectional observational study was carried out in DS children followed-up in a pediatric genetics unit of a tertiary hospital. We enrolled 44 subjects and assessed their bladder function on the basis of questionnaire and screened for urological anomaly with ultrasonography.

### **RESULTS**

We found 9 (20%) DS subjects to be associated with RUTAs of which 5 had Hydronephrosis, 1 had renal agenesis, 1 had renal calculi and others had neurogenic bladder, VUR, PUJ obstruction and renal parenchymal thickening.

### **CONCLUSIONS**

It concludes that urological anomalies are an associated complication with DS and early ultrasound screening must be done for its diagnosis and treatment.

## Stoma Related Wounds of the Body and Mind – The Nursing Perspective

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### Introduction

The field of stoma care is of immense importance to Nursing Personnel. An individual with stoma undergoes a change with wide range of adjustments affecting his physical, social and psychological state of well being. Stoma patients have to face big challenges in life. The care given to a patient with stoma can have an immense impact on the quality of his life. The objective of the study was to identify the problems related to stoma and determine the issues related to quality of life in stoma patients.

### Methodology

The study has been carried out on 30 patients (Mean age-35 years) with either colostomy or ileostomy over a period of 3 months in a tertiary care hospital in New Delhi. Stoma related complications were analyzed either during the period of hospitalization or follow up in the out patient department.

### Observations

Of the sample studied, 33% patients had skin related problems (excoriation, redness, itching etc.) at some point of time after stoma surgery. The length of time since stoma formation ranged from few days to 1 ½ years. 17% population studied expressed no problem related to stoma while 10% cases presented with leak and 3% cases presented with perforation, incisional hernia, bowel herniation etc. 80% female and 60% male population under study had BMI value less than 18.5 suggestive of their under weight

status as per WHO criteria.

80% population under study had positive feelings about their body image, while 17% did not feel good about themselves. 3% of the population studied could not relate it to body image owing to their lack of ability to comprehend. 56% respondents had adjustment problems with the family and almost all respondents under study felt dependent on others especially the primary care giver i.e. spouse.

There are adjustment problems within the family and society as there is a stigma attached to it. Lack of knowledge and low level of comprehension owing to poor educational status amongst patients regarding the outcome of illness adds to their existing problems. Due to their low socio economic status, most patients are unable to afford high cost colostomy care appliances.

### Recommendations

There is a need to train nurses that recognize the actual needs of such patients and maintain stoma care. A good communication network should be developed and proper guidance should be provided to decrease their potential problems. Patient and care givers need to be involved in different aspects of patient teaching about stoma management with special emphasis on teaching primary care giver. The health care delivery system should be designed and strengthened in a manner so as to provide comprehensive care and education to such patients to help them deal with stoma & cope better with issues related to quality of life.

# To study the prevalence of sleep disorders in parents of children undergoing cancer treatment

**Nehal Singla**

## INTRODUCTION

Cancer is a disease which takes its toll on the entire family; a view which the parents of children being treated for cancer reinforce. The effect of the cancer is felt by the child suffering from the cancer leading to major emotional disturbances due to repeated admissions in the hospital. The parents also undergo a major emotional upheaval which leads to further problems. The siblings of the child suffering from cancer also undergo emotional trauma as well as a feeling of neglect due to the fact that the parents are more focused on the needs of the child who is suffering from cancer. However, the trauma suffered by parents of child afflicted with cancer is not the same either for both parents or at different stages of treatment. The literature present on the subject also indicates that the experience of the parents of children with cancer vary in different cases.

The very nature of the cancer treatment is traumatic considering the invasive and painful procedures involved in the diagnosis and treatment of this disease accompanied by prolonged periods of hospitalization to be endured by the cancer patients and their families.

According to National Foundation for Cancer Research, at any given time in India there are 2.5 million cases of cancer. In the year 2007, in India alone 1.5 million cases were diagnosed and the same number died because of the disease. Even more alarming is the fact that 50,000 cases of the estimated cancer patients in India are children. Approximately 25% of these children will die from brain

cancer. In our country the out of pocket expenses are very high so these children and their parents struggle under a double burden of the disease and poverty. Care and treatment of such children requires the joint efforts of a team working together to provide on one hand medical treatment (chemotherapy, radiation and surgery) as required and psychological support for the child as well as the family.

Consequently, not just the childhood cancer patients but their parents also suffer from fatigue and sleep disorders. It is well known that sleep disturbances are significant stressors and lead to the deterioration of the quality of life of both the patient and their parents. Lot of research goes into the actual medical treatment of the child but in the process we somehow neglect the care of the caregivers and fail to see the stress which they undergo.

The increasing rate of childhood cancer will shortly lead to a global health problem and thus it is necessary to see the effects of cancer not only in the children affected but also in the parents and caregivers of these children. This research is, therefore, concerned with studying the incidence of sleep disorders among the parents of the childhood cancer patients.

## AIMS AND OBJECTIVES

To study the prevalence of sleep disturbances in parents whose children are suffering with cancer

To sensitize health care providers about the need for psychological support to the parents

To analyze the factors affecting the parental stress whose children are suffering with cancer

## METHODOLOGY

Parents of children diagnosed to have malignancy and on treatment for at least 6 months were enrolled in the survey. This survey was conducted at Sir Ganga Ram Hospital, Delhi. This survey was conducted from 1<sup>st</sup> November, 2008 to 30<sup>th</sup> April, 2009. In all I contacted 128 parents whose children were undergoing cancer treatment and explained survey objectives and asked their consent to participate in the survey. Only 52 parents (whose children were detected with cancer) could participate in the research

## EXCLUSION CRITERIA

\*All those parents who had any pre existing sleep disorders

\*All parents who were on any antidepressants or anti anxiety medications

*Before their child was diagnosed with cancer*

52 parents who were matched demographically and whose children were healthy were taken as control for the study. A self-administered questionnaire was given to them after explanation of sleep disturbances. Epworth sleepiness scale was used to assess the patients. The Epworth scale was developed by Dr. Murray Johns at Epworth hospital in Melbourne Australia in 1991 and used widely by sleep professionals all over the world to measure sleep deprivation. This is a validated tool to help us identify level of daytime sleepiness which can be a symptom of sleep disorder and it tells us how likely are we to doze off or fall asleep in the given conditions

in contrast to feeling just tired. [Johns MW, 1991] The whole study was done under the able supervision of my research guide Dr. Anupam Sachdeva. The questionnaire used is given in the Annexure 1.

To check the statistical significance I applied chi-square test. The degree of freedom was 51 and the significance level was 5%. The values obtained from the parents whose children were healthy were considered as the expected values and the values from the parents whose children were detected with cancer and undergoing treatment were considered as observed value. The sample was divided into two groups i.e. people with normal sleep and people with daytime sleepiness. The parents with Epworth score between 0-9 are considered as having normal sleep and the parents with Epworth scores between 10-23 were considered as having daytime sleepiness.

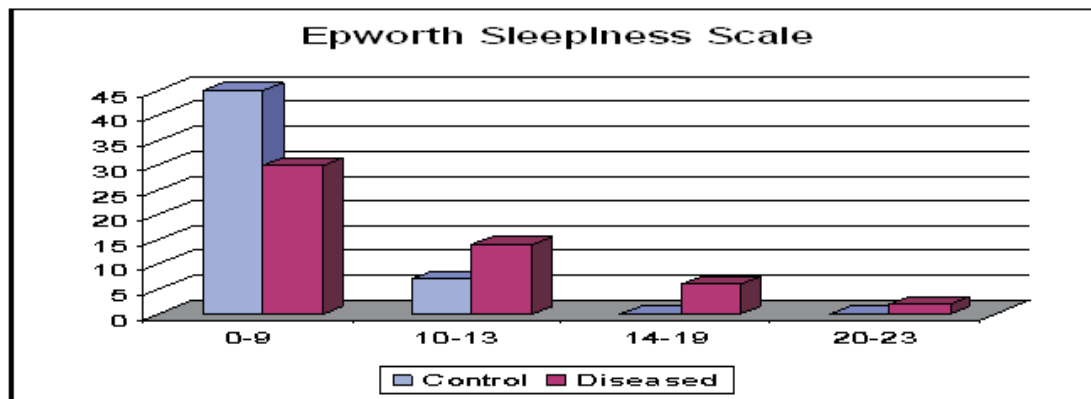
## RESULTS

104 parents were enrolled for the study out of which 52 parents were those whose children were undergoing cancer treatment and 52 those whose children were healthy. Mean age was 37.3 years.

As per the Epworth sleepiness score, the incidence of daytime sleepiness in those parents whose children were undergoing cancer treatment was 42.29% ranging from mild daytime sleepiness seen in 26.92% to severe daytime sleepiness seen in 3.84%. And 57.69% ranged in the normal category according to Epworth's scale.

As compared to this, in the set of the parents who served as control 86.54% parents were normal and only 13.46% showed mild symptoms of daytime sleepiness.

Score	Control	Diseased
0-9(normal)	45	30
10-13(mild)	7	14
14-19(moderate)	0	6
20-23(severe)	0	2



For calculation of chi-square test the above is categorized into two categories

Score	Control	Diseased
0-9	45	30
10-23	7	22

Observed	Expected	O-E	Square (O-E)	Sqr (O-E)/E
30	45	-15	225	5.00
22	7	15	225	32.14
Value of chi-square				37.14

The table value of chi-square at 5% significance level and at 51 degree of freedom is 35.6. The calculated value is 37.14 that is more than the critical value which shows there is a significant difference in the observed value and expected values.

## CONCLUSION

This study shows the high prevalence of daytime sleepiness in parents whose children are suffering with cancer and undergoing treatment. Also it should be mentioned that the control group is significantly different than the diseased group. This shows how much psychological support is required not only by the child but also by the family. It was found that the long-term parental adjustment depends on number of factors. For instance, some of the parents who are likely to show greater short term and long-term adjustment are those who:

- \*Are involved with their jobs.
- \*Enjoy support from members of family, friends, and other social support systems.

\*Undergo relatively lower levels of stress during routine parenting.

\*Consider their children likely to enjoy improved quality of life.

\*Are optimistic about the results of the treatment. [Rourke *et al.*, 1999; Kazak *et al.*, 1997; Grootenhuys *et al.*, 1997]

In contrast, parental adjustment may suffer on account of the following factors: Parents have no positive expectations about the results of the treatment.

\*Parents with a sense of helplessness, uncertainty, and anxiety.

\*Do not enjoy any kind of social support structure.

\*Their interactions with Healthcare team members have been negative.

\*They do not consider the child's quality of life to improve in any significant manner. [Dockerty *et al.*, 2000; Santacroce, 2002]

Nevertheless, various studies indicate that emotional trauma and the apparent levels of stress of the parents decrease with time. This



is despite the perception that burden of caring for a cancer afflicted child would remain the same as would be the aspects like parental control, caring and sensitivity. [Steele *et al.*, 2003] High level of social support extended at the time of diagnosis would account for such perceptions. Even though the quantity of support may decline gradually, but steady support during all phases of the cancer treatment is enough to bolster the positive perceptions.[ Hoekstra-Weebers *et al.*, 2001] Parents are generally known to be strong yet flexible, with immense ability to withstand shock and trauma,[Dockerty *et al.*, 2000] but if a child suffers the side effects of the treatment over a prolonged period, parents are likely to suffer increased feelings of uncertainty and isolation long after the active phase of treatment has been over.[ Van Dongen-Melman *et al.*,1995] It has been found in various studies that nearly 30%-36% parents of cancer survivors have experienced severe, prolonged symptoms of stress far beyond the level diagnosed for post-traumatic stress disorder (PTSD), which, by all standards, is a major problem for these parents.[Brown *et al.*,2003;Kazak *et al.*,2004]

***Greater impact of the disease would be felt by the families where***

\*The patient falls in younger age group.[ Sargent *et al.*, 1995]

\*Cancer treatments has become prolonged and painful.[ Hamama *et al.*, 2000]

\*The childhood cancer patient dies despite the treatment.[ MacLeod *et al.*, 2003]

The stress which the family undergoes should be kept in mind whilst formulating any childhood cancer treatment protocols and healthcare providers should always plan things to reduce the stress. Proper psychosocial support teams need to be formed to make any such care program successful. By sensitizing the parents to their potential medical problems we can make them seek early medical help and also make them adapt to this situation in a better way. Propagation of awareness of snoring as a major risk factor for sleep apnea will help these people to take early medical help. We can also educate them about safe

driving habits to avoid motor vehicle accidents. Studies done previously have also reported frequent health and behavior related problems in family members of cancer patients. This study also reports high prevalence of subjective disorders of sleep in parents of children diagnosed and treated for cancer. Better study designs like large sample size, and more sophisticated tools like polysomnography which add to the strength of the study and make it more scientific and will help in drawing conclusions more objectively.

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## SLEEP DISORDER QUESTIONNAIRE

DATE:

NAME:

DATE OF BIRTH:

## EPWORTH SLEEPINESS SCALE

Please use this scale to evaluate the following questions:

0 = would never doze

2 = moderate chance of dozing

1 = slight chance of dozing

3 = high chance of dozing

1. Watching T.V.
2. Sitting inactive in a public gathering
3. As a passenger in a car for an hour without break
4. Lying down in the afternoon circumstances permitting
5. Sitting and talking to someone
6. Sitting quietly after lunch not having consumed alcohol
7. Driving a car that has stopped briefly at a red light
8. Sitting and reading

Total Epworth Sleepiness Score

Epworth Sleepiness Score (ESS)

0-9 = Normal

10-13 = Mild

14-19 = Moderate

20-23 = Severe

If your results are greater than 9 and/or you feel you may have sleep apnea, this means significant sleep disorder.



## **Giant Adrenal Non- functioning tumor: A case report and review of literature**

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### **Background**

Adrenal Myelolipoma is a rare, benign, non functioning neoplasm arising from the adrenal cortex. They are composed of mature adipose tissue and a variable amount of normal haemopoietic elements.

### **Materials**

Authors present a case of a rare, hormonally inactive, giant, benign adrenal tumor, causing abdominal and flank pain.

### **Results**

The mass was excised surgically and the ipsilateral kidney preserved. The patient had an uneventful postoperative course and recovered well from surgery.

### **Conclusion**

Less than 300 cases have been reported in literature; however awareness regarding this entity is necessary to avoid extensive surgery.

## A case report on mixed lineage leukemia

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### **Abstract**

Mixed lineage leukemia is a form of acute leukemia in which morphological, cytochemical and immunophenotypic features of cells lack sufficient evidence to classify as myeloid/lymphoid in origin. It is a rare form of acute leukemia constituting about 4% of cases. This is a case report of a 17 year old girl who presented with complaints of fever for the past one month, bleeding from nose off and on for the past one month and swelling of gums for the past one week. On haematological investigations, Hb was 6.2gm%, total leukocyte count was 58000/mm<sup>3</sup>. Peripheral smear showed leukocytosis composed almost exclusively of

blasts. The blasts were large with a high nuclear-cytoplasmic ratio and scant cytoplasm. The cells had finely distributed nuclear chromatin and prominent nucleoli. Some blasts had slight cytoplasmic granularity. Auer rods were not seen. Bone marrow aspirate showed numerous immature cells with round-to-convoluted nuclei, many of them containing azurophilic granules. Rare Auer rods were seen. A presumptive diagnosis of acute myelogenous leukemia was made. On performing flow cytometry though, the diagnosis was confirmed as mixed lineage leukemia. This case is being presented for its rarity and unusual presentation

## Clinico-mycological profile of cryptococcosis in a tertiary care

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### Introduction

Cryptococcosis is a major, fatal, systemic mycosis worldwide.

### Objectives

This study was performed to know the spectrum, Clinico-mycological profile and antifungal susceptibility pattern of cryptococcosis (2007-2010)

### Material and methods

The samples were processed by standard microbiological methods. Cryptococcal isolates were identified as per standard protocol. The antifungal susceptibility of the isolates was done for amphotericin B, Fluconazole, Itraconazole as per CLSI guidelines.

### Results

Cryptococcosis was diagnosed in 51 patients. The cryptococcosis cases include HIV positive patients (42), lymphopenia (1),

neutropenia (1) and apparently immunocompetent (7). Disseminated cryptococcosis was seen in 4 patients. Relapse was seen in 3 cases. Cryptococcal meningitis was the most frequent followed by pulmonary cryptococcosis. Opportunistic infections were seen in 13 cases: candidiasis (7) tuberculosis (4) H1N1 (1), Staphylococcal septicemia (1). All the isolates were sensitive to Amphotericin B, Fluconazole, and Itraconazole. Dissemination, relapse, high mortality was common in HIV positive patients. Relapse/mortality was unlinked to MIC of the drugs. Prognosis depends upon: control of underlying condition, presence of coma at presentations, low yeast burden (LAT d"1:2048 )

### Conclusion

Routine surveillance is warranted to know the existing and baseline pattern of cryptococcosis. Expedient diagnosis can reduce morbidity and mortality in cryptococcosis.

## **Comparative Proteomics Study of *Bacillus anthracis* in culture and from Biofilm to identify the genes responsible for biofilm induction & resistance to drugs/antibiotics**

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Two types of culture can be taken: Bacteria growing in culture/Broth and bacteria from biofilm. The

proteins from the two can be extracted and they can be stained with different dyes Cy 3 and Cy 5 and run on the 2D gel. The dissimilar proteins of the two identified or have varied would be mapped to gene sequence analysed with the Mass Spectrometry / MALDI/DIGE. The genes identified could also be studied for Biofilm formation and induction, gene expression, maturation of the

biofilm, correlation with sporulation, antibiotic resistance. Once the genes and their gene products have been identified antibodies could be administered against the specific protein products and also to analyse the response of the biofilm forming pathogenic strains towards different concentration of antibiotics. Hence, the Comparative proteomics will help us to determine the molecular function of the various genes involved in biofilm formation and antibiotic resistance in *B. anthracis*.

## **Forensic Medicine Through The Ages- A study of age old mysteries and how they were solved using Forensic Science**

**Radhika Batra**

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Through the ages, Forensic Medicine has evolved as a highly analytical science involving keen powers of observation and deduction.

In my study , I have talked about age old mysteries , mysteries that have baffled humanity since centuries and how they were ultimately solved using the new techniques of Forensic Medicine and Toxicology. I have in-

cluded the mystery of the death of egyptian king Tutankhamun , the mysterious death of Napoleon Bonaparte and the mystery of the missing russian princess - Anastasia.

The new advancements in Forensic Medicine and Toxicology have helped us unravel the puzzle and have succeeded in shedding some light on the truth.

# Microbiological analysis of drinking water supply in wards/ ICU of LN Hospital

Ritika Bansal

## INTRODUCTION

Water is the major requirement for every individual on this earth. Contaminated water if consumed by people, can lead to an outbreak of water borne diseases. Water from a protected source such as properly constructed well or a source which has been subjected to some kind of treatment i.e. chlorination, UV rays etc is only considered safe for use. Water bacteriology aims at testing the drinking water for the presence of coliforms and other pathogen, indicating a recent contamination of the water source by fecal matter.

CDC (Center for Disease Control and Prevention) defines a disease as water borne when >2 persons experience similar symptoms after exposure to water encountered in drinking. Approximately 4 billion cases of diarrhea occur worldwide every year. In the year 2002, 1.8 million people were killed due to diarrheal diseases.

Significant pathogens causing water borne diseases include *Escherichia coli*, *Clostridium* spp., *Vibrio cholerae*, *Salmonella* spp., *Shigella* spp., *Brucella* spp., *Listeria monocytogens* etc.

Provision of clean drinking water has now been included as a Millennium Developmental Goal by APMCHUD.

### *Bacterial indicators of water pollution.(1):*

The bacteria present in the water act as indicators of fecal pollution. If pathogens are present then it is a clear indicator that it has been derived from the human colon but the normal commensals present in the drinking water or the water sample is more reliable of

it being polluted by human feces because they are far more in number than the pathogens. The presence of any spores of the bacteria indicates that the water may have been polluted in the past times rather than its recent pollution. Main indicator bacteria are:

**Coliforms:** These are bacteria which occur in large number in feces and sewage but are also found in the environment in the absence of fecal contamination. Thus their presence in water does not necessarily signify fecal contamination. These are lactose fermenting Gram negative bacilli and include typical or fecal (*Escherichia coli*) and atypical (*Klebsiella aerogenes*). The typical coliforms are

exclusively derived from the human intestine and are commensals in normal human beings and they die in a few days to weeks after leaving the human intestine, thereby indicating recent pollution, whereas that of atypical ones is not necessarily so as they can be derived from the normal vegetation or environment.

**Fecal streptococci:** They are also the normal commensals of the intestine and include Gram positive catalase negative bacteria i.e. *Streptococcus faecalis*, *Streptococcus bovis* etc, members of family Enterococci. Their presence in the water is a strong indicator of the pollution of water by feces but their absence does not render the water pure.

**Sulphite reducing Clostridium species:** These are the members of genus *Clostridium* and reduce sulphite to sulphide. Although it is less numerous but its spores can survive for a long time thereby indicating remote contamination. Main organisms of this genus are

*Cl.perfringens*, *Cl.difficile*.

Nosocomial infections by bacteria present in water ie, *Clostridium difficile* (*Cl. difficile*): People are most often nosocomially infected in hospitals, nursing homes, or institutions, although *C. difficile* infection is increasing in the community and outpatient setting. (2)*C. difficile*-associated diarrhea (aka CDAD) is most strongly associated with the use of fluoroquinolones.

*Pseudomonas aeruginosa*: It can multiply in aquatic environment but absent in feces. It is not a good indicator of water pollution but it is an opportunistic pathogen.

### AIMS AND OBJECTIVES OF THE PROJECT

1. To test the samples of water taken from different wards and ICUs of Lok Nayak hospital for the presence of coliforms & other pathogenic bacteria
2. To determine the Presumptive coliform count in each water sample and comment on the safety of its use.
3. To perform the antibiotic susceptibility testing for all the isolated pathogenic bacteria

### METHODOLOGY.(3)

Collection of the sample: About 100 ml of each sample to be tested will be collected in a sterile bottle. When collecting sample from a running tap, the water will be allowed to run waste for 2-3 min before collection. The bottle will be stoppered and labeled with full details of the water source, time and date of collection of the sample.

Bacteriological count in water:

The routine tests generally used in bacteriological examination of water are:

1) Presumptive coliform count by multiple tube method: It is the quantitative test for all the coliform bacilli. The estimation of the coliform count is generally made by adding varying quantities of water (from 0.1ml to 50ml) to bile salt lactose peptone water (with indicator of acidity) contained in bottles with Durham's tubes to show the formation of gas;

acid and gas formation indicates the growth of coliform bacteria.

Multiple tube method: Liquid culture medium ie, MacConkey's broth is used at 50 and 10 ml volumes of double strength concentration and 5ml volumes of single strength in suitable test tubes having an inverted Durham's tube to detect the production of gas.

Water samples to be tested will be aseptically added with sterile graduated pipettes to MacConkey's broth medium in the following amounts:

- one 50 ml quantity to 50 ml double strength medium
- five 10 ml quantities each to 10 ml double strength medium
- five 1 ml quantities each to 5 ml medium at single strength
- five 0.1 ml quantities each to 5 ml medium at single strength

The inoculated medium will be incubated at 37°C for 24 hrs and the results will be noted by comparative analysis with the standard MPN (Most probable number) charts. The identification of the micro-organisms will be confirmed by sub-culturing on to MacConkey's and blood agar media and following the standard identification protocols

2) Differential coliform count: To ascertain whether the coliforms detected in the presumptive tests are *E.coli*, the Eijkman test will be employed. This depends on the ability of *E.coli* to produce gas when growing in bile salt lactose peptone water at 44.0°C and inability of atypical to do so. After the presumptive test the subcultures are made from the bottles showing acid and gas production into fresh tubes of single strength Mac Conkey's broth. They are incubated at 44°C and examined after 24 hrs.

Gas production in Mac Conkey's broth at 44°C

Indole production at 44°C

+

+

Typical coliform bacilli

+



- 
- Irregular forms of coliform organisms
- 
- +/-
- Other coliform organisms
- .

Antibiotic susceptibility testing: The susceptibility of all the isolated pathogen in the water samples will be tested against antibiotics using disc diffusion (Kirby Bauer's) method.

## **Study of synaptogenesis in tongue epithelium in human foetuses using synaptophysin as immunohistochemical (IHC) marker**

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Development of taste in higher organisms always has been a very fascinating yet lesser understood among the five special senses. Many events including the development of taste receptors, neuronal connections and the gustatory cortex determine the overall advent of taste in a human foetus. Each taste bud is innervated by peripheral extensions of primary afferent neurons coming from the sensory ganglia which synapse with the taste receptor cells (TRCs) and convey information to CNS from the tongue epithelium. Hence, the neurons are postsynaptic to sensory cells (TRCs), thereby being functionally similar to CNS neuron dendrites. With an intention of studying the approximate beginning of synaptogenesis in the tongue epithelium, I used a specific marker for synaptophysin, a 38 kDa integral membrane protein found in small, round or flat synaptic vesicles. Synaptophysin being an indicator of vesicle formation is used as an indicator of neurogenesis and terminal neuronal differentiation, for studying neural dysgenesis, medulloblastomas and other neural disorders. In this study, I used sagittal sections of tongue from five human foetuses of ages ranging from 14 to 20 weeks to study the gradual appearance of taste buds using staining with haematoxylin and eosin, and the expression of synaptophysin in the tongue epithelium using immunohistochemistry with anti-synaptophysin antibody. Across the ages, there was an increase in the number of papillae on the dorsum of tongue. In 16-18

weeks, primary papillae were visible which changed to secondary papillae in the later ages of 20 and 22 weeks, indicating maturation of papillae throughout the period 14 to 22 weeks. In 22 week foetus, probable taste buds were identified, which showed organisation into cells with rounded nuclei, the probable basal cells, cells with elongated nuclei, the probable sustentacular cells and elongated cells with a process, the typical neural cells. Expression of synaptophysin was not found in age groups of 14th to 18th weeks. However, there was very faint expression in the epithelium and within the muscle layer in age groups of 20th and 22nd weeks, suggesting the beginning of synaptogenesis and vesicle formation in the age groups of 20 and 22 weeks. Moreover from 16th week onwards, lingual glands were observed in the posterior part of tongue, this being significant as per taste reception. In view of presence of the protein in the muscle layer, we hypothesize that along with its expected presence in the pre-synaptic terminals of the TRCs, it is also produced in the ganglionic cell bodies and is anterogradely transported to be concentrated in axonal endings of sensory neurons, where they probably participate in the regulation/modulation of neurotransmitter release by the TRCs. This work indicates the maturation of taste buds and synaptic vesicles in human foetal tongue epithelium around 20-22 weeks age and this observation will pave the way for future understanding of the development of taste reception in utero.

# A Retrospective Record Based Study on Anaemia among Women in Post Natal Period

**Shradha Gupta**

KMC, Magalore

## INTRODUCTION

Anaemia in the antenatal period is a well documented problem. Anaemia in the post-natal period has been documented from various studies conducted outside India. It ranges from 25% in Germany to 64.4% in Uganda. The only published study on anaemia in post-natal period reported high prevalence rates (70%); but the socio-demographic correlates were not clear. So, the current study was undertaken.

## AIMS AND OBJECTIVES

To study the clinical profile and the correlates with anaemia in post-partum period among women admitted to Lady Goschen Hospital, Mangalore.

## MATERIALS AND METHODS

A retrospective record based study of 165 women (number obtained by applying the Sample Size Formula) with Haemoglobin less than 12g/dl were included for the study. Patients with insufficient information in the records were excluded. Standard operational definitions for anaemia and various risk factors were adopted. A pre-tested semi-structured

proforma was used to collect the required information.

## DATA ANALYSIS

Chi-Square test was the statistical test used ( $p < 0.05$ ) was considered significant).

## RESULTS

Women in the age group of 18-24 years and 24-30 years constituted 38.2%, 42.4% respectively; half of them being primi-gravida. Majority of women belonged to low socio-economic category (monthly income less than Rs. 1500). Though anaemia was detected in first trimester in 55.2% of women, they could not be cured (93.3%) during pregnancy. Few antenatal check-ups ( $< 3$  visits, 72.1%) and failure of treatment compliance (55%) were the main reasons.

## CONCLUSION

Failure to cure anaemia in the antenatal period is responsible for anaemia in the post-natal period; the major causes being few antenatal visits and non-compliance towards treatment by the women.

## To study role of clinical and laboratory parameters for diagnosis of tuberculous meningitis in a tertiary care centre

**Sivanand Sandilya Patel**

Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi

### Introduction

Diagnosis of tuberculous meningitis is still an enigma as most of the times the laboratory results do not co-relate with the established parameters for tuberculous meningitis. This study aims at evaluating various clinical and laboratory parameters for rapid diagnosis of tuberculous meningitis.

### Material & Methods

A total of 36 clinically diagnosed tuberculous meningitis cases on the basis of modified Ahuja's criteria were included in the study. CSF was analyzed for cytological, biochemical, and microbiological parameters (ZN smear microscopy, culture by BactALERT 3D method, Real TimePCR). Radiological findings on CT/MRI were obtained. Real Time PCR was performed by Genosen's MTBC/MOTT. The isolate was confirmed to be *Mycobacterium tuberculosis* by Accuprobe culture identification kit, Genprobe.

### Results

Amongst the clinical parameters, majority (47%) of the cases had altered sensorium fol-

lowed by neck rigidity (36%), muscle weakness (30%), abnormal pupil's response (30%), focal neurological deficit (20%) and positive babinski sign (19%). Computed tomography findings showed communicating hydrocephalus as the most common finding (22%) followed by tuberculoma (17%) and infarcts (8%). Extraneurological active pulmonary TB evidence was present in 20% cases and past history of tuberculosis in 13%. Culture was positive for *Mycobacterium tuberculosis* in 11% of the cases. The sensitivity for radiological evidence was 91% followed by cytology (58%), biochemistry (58%), and real time PCR (25%).

### Conclusion

Most of the tests including culture, cytology, biochemical analysis and molecular assays have shown sensitivity of less than 60%. The present study concludes that radiological evidences along with clinical suspicion remain the best parameter for diagnosis tuberculous meningitis.

## Family influences the decision of undergraduate students to choose medicine as a career

**Sonal Pruthi**

University College of Medical Science, New Delhi

### Introduction

It has been held that every High School student aims to be a doctor or an engineer. However, there is little evidence to support it. The current study aims to understand why contemporary undergraduate medical students choose medicine as a career.

### Methods

This cross-sectional study was conducted in a tertiary-care, teaching hospital in March 2010. Medical students in their second semester were asked to fill an indigenously designed structured questionnaire, looking at their reasons for joining the course, inter-personal relationships, satisfaction with the curriculum and future prospects following graduation, after they consented to participation. The data analysis was done using SPSS 15.0.

### Observations

The mean age of participants was 19.21 ( $\pm 0.85$ ) years. Of 110 students of second se-

mester, most (41, 35.6%) had been influenced by a family member in choosing their career. Only 12 (12.7%) felt that medicine would give them a chance to serve society. 56 students (50.9%) felt that the expectations they had from the course prior to beginning their studies were not being fulfilled. Further, nearly a quarter of the students 31 (28.2%) would not choose MBBS as a career if given a second chance, while 19 (17%) were certain that they would change their profession and take up an alternate stream. Non-fulfillment of expectations from the course was associated with the belief that they would not opt for this course if given a second option (LR 7.12,  $p$  0.008). Students felt that teaching should lay stress on problem based learning including stress and time management workshops. Conclusions: Most students opt for a medical career due to influence of family members and do not have a defined career plan. It is time that the medical curriculum be suitably modified taking students' expectations into consideration.

## **Immuno-prophylaxis against development of cardiac valvular complications in patients with rheumatic fever: A proposed method**

**Sorabh Badaya**  
GRMC, Gwalior

Rheumatic heart disease (RHD) is a serious medical condition recognized as an immunologically mediated complication of rheumatic fever with an autoimmune component due to molecular mimicry between the bacterial antigens and certain body tissues. In view of the prevalence and seriousness of the disorder, its prophylaxis assumes high significance and serious concern. The current attempts at the prevention of RHD do not appear very prom-

ising and effective. This brief paper postulates an immunomodulated prophylactic measure aimed to decrease the magnitude and intensity of the antigenic stimulation by the beta-hemolyticus group A streptococcus and body tissues which share heterophilic antigenicity between themselves in a hope to minimize heart damage and also prevent or delay the progression of the disease itself.

## **Evaluation of effectiveness of laparostomy vs primary closure in severe secondary peritonitis**

**Sudhanshu Punia**

Vardhaman Mahavir Medical College and  
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Perforation peritonitis is associated with a severe morbidity and mortality. Patients outcome is significantly influenced by early adequate surgery and/or peritoneal drainage: moreover, even early and adequate empirical antimicrobial therapy influences patients morbidity and mortality. Surgical treatment usually consists of a laparotomy to eliminate the source of infection, per operative peritoneal lavage to reduce the bacterial load, and prevention of persistent or recurrent infection. The open approach ie. Laparostomy, showed beneficial results as the percutaneous drainage

of abscess from an open abdomen prevented penting up of infectious materials inside the abdomen and hence avoided further complications like burst abdomen, sepsis and death. Our study focuses on evaluation of scoring systems like APACHE II and MPI and comparison of effectiveness of laparostomy vs primary closure in severe secondary peritonitis. 60 patients were randomly divided into two groups of 30 each. The two scoring systems were evaluated for their predictive power in terms of mortality; and the two surgical procedures in terms of outcome.



# Patient's Comprehension, Satisfaction and Compliance To The Doctor's Advice

**Shreya Akhil, Keerthana Gangadharan,  
Sukriti Bhasin, Pradyumn Shenoy, Anusha  
Shree, Ankur Kumar**

Kasturba Medical College, Mangalore  
(Manipal University)

**Rekha Thapar**

Assistant Professor, Department of  
Community Medicine, KMC, Mangalore

## INTRODUCTION

Doctor-patient relationship forms an important foundation for effective practice of medicine. There is a strong positive correlation between effective doctor-patient interaction and patient adherence to scheduled appointments and other physician instructions. From the various surveys conducted, the physician-patient satisfaction levels were found to vary from 60% to 80%.

## AIMS AND OBJECTIVES

To assess the patient's comprehension, satisfaction and compliance to the advice of doctor among patients visiting OPDs of four hospitals of Mangalore.

## MATERIALS AND METHODS

Demographic information and information on patient's feelings about their doctors was collected from 390 patients in a cross sectional survey, using a questionnaire.

## DATA ANALYSIS

Data was analysed using the SPSS Version 11.5.

## RESULTS

Of the 390 patients studied, 90.1% were generally satisfied with their interaction with the doctor. 6.3% were uncertain and 3.6% were unsatisfied. Patient satisfaction was positively associated with adherence intent. 95.7% of the patients were compliant to the doctor's advice. Patient's confidence in the doctor and good communication skills on the part of the doctor predicted patient satisfaction.

## CONCLUSION

This study suggests the need for primary care physicians to be aware of the important place of interpersonal skills development in the application of medical knowledge and expertise in the provision of health care.

# Prevalence and incidence of drug induced pancreatitis in seropositive patients on antiretroviral therapy (ART)

**Tuhina Cornelius**

RNT Medical College, Udaipur

## BACKGROUND

Pancreatitis is a known adverse effect of the nucleoside reverse transcriptase inhibitor drugs-a major drug of the anti-retroviral therapy (ART) which causes premature termination of proviral DNA chain by inhibiting reverse transcriptase enzyme. Drug induced pancreatitis in HIV patients is presented as a sudden onset of abdominal pain, nausea, vomiting and general worsening of health. PURPOSE-To analyse whether pancreatitis presents differently in HIV-seropositive patients compared to the general population and to figure out the prevalence and Incidence of Drug induced Pancreatitis in HIV patients on ART in the tribal belt of southern Rajasthan (mewar region).

## METHODOLOGY

We are conducting a case control study on 100 patients above the age of 18 years, only seropositive (HIV +ve) patients have been included. Alcoholics, patients with gall stones, biliary obstructions, endocrinal problems and patients on corticosteroid therapy have been excluded as these can be the secondary causes of pancreatitis. The study is broadly divided into two parts.1) In first part incidence or prevalence of pancreatitis in HIV patients on medication will be observed from the HIV cases which are coming to the central lab and medicine wards of M.B. Govt. Hospital, Udaipur, Rajasthan for investigation. The various aspects taken into consideration are community, residential status (rural/urban), tribal and non-tribal, socio-economic status, family

history and most important the presenting complaints. 2) The second part of study is the clinical study which includes 100 HIV patients on medication. The Serum Amylase and blood sugar levels are estimated, simultaneously pancreas is observed by ultrasonography.

## RESULT

Based on the previous studies, we are expecting to get at least 3-4% prevalence of drug induced pancreatitis in the HIV patients under study. However, our study is still under progress and we have not yet obtained the results of our research.

## IMPLICATION

1.)To get sufficient data, knowledge and background of the disease under study. 2.) As an attempt to figure out the prevalence and incidence has been made for the first time so we are expecting some particular pattern of the disease so that we can explore it and take some mandatory steps in order to control it. 3.) To discover other factors that may be associated with drug induced pancreatitis (if any) which may be speeding up and worsening the above pathologic condition. 4.) As we are conducting the study in this tribal belt where people usually get infected with AIDS out of illiteracy and their unhygienic lifestyle we aim to spread awareness. 5.) After the analysis of the data we hope to find out the alternatives to avoid the occurrence of pancreatitis in other HIV patients coming for follow up.

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This century will be the century of the brain. Intelligence will define success of individuals; it remains the main ingredient of success. Developed and used properly, intelligence of an individual takes him to greater heights. Ask yourself, is your child intelligent! If yes, is he or she utilizing the capacity as well as he can? I believe majority of people, up to 80% may not be using their brain to best potential. Once a substantial part of life has passed, effective use of this human faculty cannot take one very far. So, parents need to know how does their child grow and how he becomes intelligent in due course of time. As the pressure for intelligence increases, the child is asked to perform in different aspects of life equally well. At times, it may be counter-productive. Facts about various facets of intelligence are given here. Other topics like emotional intelligence, delayed development, retardation, vaccines, advice to parents and attitude have also been discussed in a nutshell. The aim of this book is to help the child reach the best intellectual capacity. I think if the book turns even one individual into a user of his best intelligence potential, it is a success.

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