

## ABSTRACTS OF PAPERS PRESENTED AT IMSACON 2012

### TMA Pai Oration

*Prof. S.M.Rajendran, Sree Balaji Medical College & Hospital, Chennai, TN, India.*

Beyond Type 1 And Type 2 Diabetes Mellitus - Any Type 3 & Type 4 Diabetes Mellitus ?

Role Of Third Eye And Electro Magnetic Pollution In Controlling Diabetes

Diabetes Mellitus is increasing globally. In 1985 6% of Population (30 Millions). In the year 2000 - 2.8% of Global Population. (171 Millions). By year 2030, 4.5% of Global population (-366 Millions) soon. India will be the capital of Diabetes Mellitus.

Why and what is the cause for this enormous increase in incidence. Where is the fault? Fault with Patient, Physician, Drugs or Environment?

Environment: The Five Most important Elements (Panja Budham) Earth, Air, Atmosphere, Fire and Water are playing Major role in keeping sound health. Our Body is revolving with the ENERGY (Magnetic Energy). As long as this Energy is benign our Gene Function, Electrolyte levels and all our biological health maintained when this Energy (Electro Magnetic Pollution) turns Malignant then our biological system becomes erratic and leads to many problem. Among that, a Metabolic Malignant disorder will take place that is Diabetes Mellitus.

Electro Magnetic Pollutions called Dirty Electricity. This has been engulfed in our country. Each particles, why each atom in contaminated. Our country people are living, working, dining and sleeping with Dirty Electricity. It has become inseparable and more over, this Electricity is invisible Odourless and inaudible. It could neither touched, tasted nor sensed.

All Day to day Electronic Instruments produce Dirty Electricity. This leads to Genotoxic.

There is growing epidemiological Evidence which suggests a relationship between plasma glucose levels, Insulin secretion with Electro Magnetic Force (EMF).

This type of problems now termed as Type 3 Diabetes it actually experiences, spikes in the Blood Sugar and increased Heart Rate when exposed to electrified pollution.

### TYPE 4

#### Low Cell Glucose (Hypoglycemia) but when Blood Sugar is Normal?

In Insulin Resistance. What happen? Both Insulin and Blood Sugar goes up, but cells are deprived. Hypoglycemia lead to Neuropathy (Neurological Diabetes).

Third eye .The Third Eye nothing but pineal Gland unfortunately it was not studied exclusively, now only we have opened the Third Eye.

Pineal Gland Melatonin Plays a Major role in repairing the Gene. Gene exposure to EMF is brought under control by Melatonin

CONCLUSIONS :Diabetes Mellitus is Mysterious Metabolic Malignancy / Catastrophe affects the whole body. The ð cell plays an important role in controlling our sugar but the control of ð cell and Regeneration of ð cell plays hide and seek game for clinician.

If you open your Third Eye & control your Dirty Electricity we can win over diabetes.

### Recent Advances in Management of Diabetic Foot Ulcer

*Ashok Damir, Fortis Hospital, New Delhi, India.*

Within last couple of decades Diabetes has become major health issue with India having 61million cases, a soaring one fifth of world diabetes population.

Since number of Diabetic patients are increasing hence number of diabetic patients with it's myriad complications are also increasing. Non healing Diabetic Foot Ulcer is one of the very important but most neglected complication of Diabetes.

Approximately 14% of diabetic ulcers lead to amputation & in most of the cases it is trivial foot ulcer which ultimately leads to amputation . That means if Diabetic Foot Ulcer can be managed in earlier stages then probably we can cut short no. of amputations taking place because of Diabetes.

The 3-year mortality after a first amputation has been estimated as high as 20-50%, and these numbers have not changed much in the past 30 years, despite huge advances in the medical and surgical treatment of patients with diabetes.

But prompt treatment of chronic non healing Diabetic Foot Ulcer with multidisciplinary approach can overall change the clinical outcome in non healing DFU.

Recent technological advanced combined with better understanding of the wound healing process have resulted in a myriad advanced wound healing modalities in the treatment of diabetic foot ulcers.

Ultrasonic debridement, Topical growth factors, Bioengineered skin grafts(BATs), VAC(Vacuum Assisted Closure) Therapy, Hyperbaric Oxygen Therapy(HBOT),Maggot's therapy etc. are few of new modalities which have been developed in last few decades who have revolutionised the whole management of chronic wounds particularly Diabetic Foot Ulcers. Clinical studies of using these modalities have shown some evidence of improved healing compared to standard wound care.

Though recent advances in the management of Diabetic Foot Ulcers have increased our abilities to salvage the lower limb, but all these new modalities need proper training of using them .Their cost factors is also very important particularly for third world countries.

Conclusion: Management of nonhealing Diabetic Foot Ulcers has always been a challenging task for clinicians. During last couple of decades certain new modalities have been developed for managing this menace. Number of clinical studies have proved that judicious use of these modalities at right time & for right indication definitely help in salvage of lower limb but the need is proper training of clinicians & technicians for using them and of course cost constraint is a major issue for third world countries.

### Maternal obesity an independent risk factor for future obesity in the newborn.

*Agnes Mathew, Professor OG, Pondicherry Institute of Medical Sciences, Pondicherry, India*

The incidence of obesity and overweight has almost doubled in Western societies and the trend is mirrored in Eastern nations. The 'fetal origins' hypothesis, first proposed by Barker termed the 'Developmental Origins of Adult Health and Disease' (DOHAD), states that exposure to an unfavourable environment during development, programmes changes in fetus such that the individual is then at greater risk of developing lifestyle diseases.

This maternal obesity and fetal metabolic programming is a fertile epigenetic soil for obesity. Infants born to obese, overweight, and diabetic mothers, even when normal weight, have increased adiposity and are at increased risk of later metabolic disease. The usual increase in insulin resistance seen in late pregnancy is enhanced in obese mothers, causing marked postprandial increases in glucose, lipids, and amino acids and excessive fetal exposure to fuel sources, which in turn increases fetal size, fat stores, and risk for diseases.

In a longitudinal study of women with GDM, it was noted that obesity was an added risk for complications and poorer outcome for the fetus. The women entered the study at diagnosis of GDM as per protocol testing in the antenatal clinic. BMI was calculated and groups divided on its basis. Glycaemic control was achieved by diet alone or diet and insulin as needed. If control was not satisfactory, the case was excluded from the study. The pregnancy was followed up till delivery, the mode of delivery and fetal outcome were noted. It was seen that the out come measured by lower APGAR score, macrosomia, and neonatal ICU admission were all directly proportional to the maternal BMI even when the glycaemia was controlled. This proves that obesity is an independent risk factor for complications, macrosomia and future obesity.

### Argyrobium Roseum Possessing Beta Cell Neogenesis and Hypoglycaemic Activities – A hope for the Treatment of Type 2 Diabetes Mellitus

*Pavan Malhotra and O.P Gupta , Department of Pharmacology & Therapeutics, Acharya Sri Chander College of Medical Sciences and Hospital, Sidhra Jammu. 180 017, India.*

Argyrobium roseum is not reported for any biological activity or therapeutic use. The plant was taken up for study on the basis of information that some cases of diabetes had been treated by a person residing in a hilly area by the use of this plant.

The plant powder was subjected to fractionation with different solvents. A number of fractions were obtained and evaluated for hypoglycaemic activity on normal fasting rats. The alcohol extracted fraction (AR) showed maximum activity and was taken up for detailed study. Hypoglycaemic activity was also observed on streptozotocin (STZ) treated and glucose loaded hyperglycaemic rats. The evidence of neogenesis of beta cells came through an experimental model that was designed to explore the said activity. It is based on the use of that dose of STZ that caused death after a period of 2-4 weeks preceded by hyperglycaemia and body weight loss compared to a high dose that caused early death. A test drug if possessing beta cell neogenesis activity can be tested during the said period of 2-4 weeks. It was 40 mg/kg I.P. of STZ that was found to be a suitable one.

Results and Discussion: The rats were treated with test drugs from day 7 to day 21 of STZ treatment and observations were carried out till day 42. While the rats of the control and glipizide treated groups suffered from rising hyperglycaemia, body weight loss and death by day 28, the AR treated rats had their blood sugar and body weight gradually restored back to normal and they continued to survive till day 42.

On this day the status of beta cells of these rats was determined by testing the hypoglycaemic dose of AR. The hypoglycaemic effect recorded was as good as recorded in normal animals. This clearly indicated the neogenesis of beta cells besides the other observations made i.e. normalization of blood sugar, recovery of body weight and no mortality.

AR tested in 200 & 100 mg/kg p.o doses for the said activity showed dose dependent effect. Activity guided fractionation of AR for isolation and identification of active constituent revealed the presence of D-pinitol (3-O-methyl-chiroinositol) already reported for possessing insulin like activity. While hypoglycaemic activity recorded with AR is to be attributed to D-pinitol, the beta cell neogenesis activity whether it is due to D-pinitol or some other constituent of AR remains to be confirmed by cytological evidence.

### Metabolic Syndrome; Perils for Pregnancy and Precursor for Childhood Obesity

*Shailini Singh, Professor of Ob./Gyn. Director of Maternal Fetal Medicine at University of Buffalo, 239 Bryant Street, Buffalo, NY, USA*

In USA metabolic syndrome is rampant with pregnancy associated with GDM, Type 2 diabetes, hypertension and hyperlipidemia. These pregnancies are at high risk for complications associated with pre eclampsia leading to prematurity. To analyze the outcome of diabetic pregnancies stratified by BMI and classified by hemodynamic state with impedance cardiography. We performed a retrospective review of diabetic pregnant patients who had hemodynamic parameters determined by impedance cardiography prior to 22 weeks gestation. Diabetic management was evaluated by using memory meters at 24, 28, 32, and 36 weeks. Patients were categorized by hemodynamics: normal CO < 7.4L/min., and MAP <100mm. Hg., Hyperdynamic: CO 7.4 L/min., mixed hemodynamic: SVR >1200dyne\*sec\*cm.<sup>-5</sup>. They were also stratified by BMI, normal 18.50 -24.99, overweight 25-39.9, Obese >40. Using the same protocol of diabetes management, ultrasound guided abdominal circumference measurement to direct BS control and targeted treatment based on hemodynamic data and stratifying the pregnant diabetics based on BMI.

Results: Normal hemodynamics were associated with decreased pre-eclampsia rate (4.5%VS16.1%, vs 60.0%, p<001. decreased incidence of Oligohydramnios, larger mean BW % ( 71%vs59% vs 50%) and longer mean GA (36.6vs 34.4p=.046) the mixed hemodynamics group had the greatest incidence of pre-eclampsia (OR=11.25, p=.028), lowest BW % and shortest GA. NO detectable neonatal outcome existed. Using the above protocol we were able to normalize the birth weight. Normal BMI 58%, overweight 60% and obese 66%. Conclusion: Impedance cardiography along with Ultrasound guided aggressive management of diabetes can be used to predict poor outcomes and also normalize the fetal weight, hence changing the in utero programming.

### Algorithm for the Diagnosis of Polyuria

*R V S N Sarma, Prof. of Medicine, College of General Physicians, Chennai, TN, India.*

#### Introduction

- Polyuria is a very common clinical dilemma, often not worked up systematically . Routinely we ascribe it to diabetes mellitus, but there are many causes to consider
- PU -Passage of Excessive quantity of urine, PU implies water or solute diuresis . At least more than 2.5 to 3.0 L./dav, Or Urine of > 40 ml/kg/day
- Polyuria usually associated with Polydipsia which results in an excess water intake
- Water intake of more than 100 ml/kgld (6L/d) . Frequency of urine -Frequent passage of small amounts of urine -Many causes
- UTIs, BPH, UT stones, Urinary Incontinence

#### Classification

- Endocrine : DM, CDI (Central Diabetes Insipidus), Cushing's syndrome
- Renal : CRF, Relief of UT obstruction, CPN, NDI (Nephrogenic DI), Fanconi syndrome
- Iatrogenic: Diuretic therapy, Alcohol, Lithium, Tetracyclines Metabolic:Hypercalcemia, Potassiumdepletion
- Psychological : PPD or CWD . Other causes: Sickle-cell Anemia, PSW Diabetes Insipidus (DI) -4 Types 1. Central DI (Neurogenic) -El of the ADH or AVP

2. Nephrogenic DI, Non response of kidneys to ADH
  - a. Primary Polydipsic DI -suppression of ADH by excessive fluid intake
3. Diposogenic, Psychogenic or Iatrogenic DI -excessive water drinking as Rx.
4. Gestagenic DI, in pregnancy due to ADH destruction by placental vasopressinase.

#### Diagnostic Perplexity of Gestational Diabetes (GDM)

**R V S N Sarma, Prof. of Medicine, College of General Physicians, Chennai, TN, India.**

- Several RCTS have established the benefits of standard treatment of GDM
- The issue of Dx. of GDM is apparently simple. This paper highlights its perplexity
- The opinion on the method of screening and diagnosis of GDM is still unsettled
- The National Diabetes Data Group (NDDG), The W.H.O., The American Diabetes Association, Carpenter-Coustan criteria, International Association of Diabetes and Pregnancy Study Groups (IADPSG), Diabetes In Pregnancy Study in India (DIPS) Hyperglycemia and Adverse Pregnancy Outcomes (HAPO)- all have formulated their sets of criteria and guidelines. Agreement and uniformity in the recommendations still eludes. Controversy is more than consensus. Need an easy, simple one point test
- Indian scenario is even complex. Constrained resources, man power, community Dx. Major Issues of disagreement in the diagnosis of GDM
- Screening versus Diagnosis; Universal versus Selective Screening
- 100 C OGTT, 75 g OGTT, 50 g GCT (Glucose Challenge Test)
- One sample, two samples and three samples; Need for repetition of screening
- Two step procedure versus One step procedure -diagnostic accuracy issues
- Test thresholds and cut off values -implications on sensitivity and specificity . Two abnormal values versus one abnormal value -what do we miss
- Fasting Plasma Glucose (FPG) -?Non suitability in Asians with high insulin resistance . Now, the use of Glycated Hemoglobin and Glycated Albumin as ?screening tests
- Timing of the test at first antenatal visit or 20, 28 and 34 weeks of pregnancy . Cost effectiveness of the test procedures -Utility of glucometers

#### Innovative And Regenerative Hernia Repair With Dynamic Implants

**Sarabjit Singh, Surgeon, Government Multispecialty Hospital, Chandigarh, India**

Hernia is a common surgical condition and surgery for hernia is the most commonly performed surgery. A large variety of surgical procedures are done to treat hernias. Still the problems of recurrence and chronic pain, post operatively affect the quality of life of the patients. Practice of surgery has marched from being merely life and limb preserving to being enhancer of post operative quality of life. Patient reported outcomes take precedence over clinical outcomes and this has encouraged surgeons to innovate. New innovative method of treatment of hernias with 3 D dynamic implants which result in regenerative hence physiological healing of hernias is discussed. We also present our initial experience with these implants. We have used dynamic implants in 11 inguinal and 10 ventral hernia repairs at GMSH-16, Chandigarh with good results after a follow up period of upto one year.

#### Condylar Osteomyelitis Secondary to Dental Extraction: An Unforeseen Consequence

**Rohit S., Department of Oral and Maxillofacial Surgery, Rajarajeswari Dental College and Hospital, Ramohalli Cross, Mysore Road, Bangalore, India**

Osteomyelitis of the mandibular condyle secondary to dental extraction is an uncommon disease with a scarce mention in the medical and dental literature. Osteomyelitis is an inflammatory process involving cortical and cancellous bone. In the maxillofacial region, the mandible is the most frequently affected bone. In the most majority, a bacterial focus can be identified as the origin of the disease. Because of the anatomic location of the condyle, it is often not easy to obtain enough diagnostic information from plain radiography. The general dentist is usually the first healthcare practitioner to evaluate oral disease, initiate treatment and manage complications. Osteomyelitis is a well known, but rare complication of dental extractions. This clinical case describes osteomyelitis of mandibular condylar process, coronoid process and ramus in a 30 year old woman as a severe complication following third molar removal. Timely intervention with a less invasive procedure saved the patient from the significant morbidity possible with infection in this region.

#### Total Glossectomy: Concepts, Techniques and controversies

**Prof. Jacob Kurien, Kasturba Medical College Manipal, India PVS Hospital, Calicut, India Malabar ENT Research Centre, Malappuram, India**

The treatment of advanced malignancies of the tongue with total glossectomy is controversial. Poor survival rates and limited palliation afforded by radiotherapy alone, together with progress made in reconstructive surgery in restoring mucosal continuity after large resections make total glossectomy reasonably indicated for advanced carcinoma of the tongue.

We hereby present an interim report of an ongoing study started in November 1992 and ending in November 2012.

In our series 37 patients underwent total glossectomy for advanced carcinoma of the tongue without laryngectomy. Only in 9 cases a temporary tracheostomy was done. Reconstruction was done using regional and free flaps. Analysis was done with regard to operative management, oral reconstruction, rehabilitation of deglutition, speech and survival. Four categories of patients were included: (i) Large primary tumours of the tongue and tongue base. (ii) Recurrence after initial radiotherapy, brachytherapy, chemotherapy or a combination of these modalities. (iii) Recurrence after initial surgery and radiotherapy. (iv) Double primary tumours.

In cases where total glossectomy is indicated, preservation of larynx is worthwhile and can be justified unless the larynx is involved by the tumour, there is risk for aspiration or extensive pharyngeal resection hampers the swallowing. Total glossectomy with laryngeal preservation in properly selected patients provides local and regional control. It is a reasonable compromise in the quality of life as it preserves the mechanism of deglutition and voice.

Earnest attempts are thus being made to improve the quality of life in the pursuit of happiness of cancer victims Dr Sreejith Sreenivasan MS(ORL-HNS).

#### Limb Salvage in Girdle Bone Tumours

**Prof. Jacob Kurien, PVS Hospital, Kozhikode - 673002, Kerala, South India. MES Medical College, Perinthalmanna, Malappuram, Kerala, India.**

The conventional Method of treatment for Girdle Bone Tumours are hind quarter amputation or fore quarter amputation. In the present series we are presenting our series of 14 cases of innominate bone tumours and 9 cases of Sacral Tumours of which 13 were operated. 7 innominate bone excision (Internal Hemipelvectomy)

-Limb Salvage and 2 Conventional Hemipelvectomy and 4 Sacrectomies.

Internal Hemipelvectomy is Limb salvage procedure for innominate bone tumours. With regard to shoulder girdle 7 cases are included in the series of which 3 underwent Tichoff Leinberg procedure 1 Scapulectomy and 3 Fore quarter amputation. Enneking's classification was followed. Simple reconstructions with nails and screws were done as indicated and no Prosthetic Reconstruction was done. Post operatively 2 patients expired due sepsis secondary to chemotherapy induced neutropenia. Patients were followed up for six months to four years. All patients had good mobility. 2 patients of Sacrectomy had tumour recurrence. 3 patients were lost for follow up.

In conclusion procedures mentioned in our series can be attempted as Limb Salvage procedures although they are major complex collaborative surgeries.

#### Imaging in Female Infertility

**Rajul Rastogi, Yash Hospital & Research Center, Kanth Road, Civil Lines, Moradabad, Uttar Pradesh, India**

Infertility is defined as the inability of the couple to achieve conception within 12 months. Approximately 10% of the couples suffer from infertility with nearly equal affection of both sexes. There are multiple causes of female infertility that are broadly divided into to uterine, ovarian & tubal causes and are further subdivided into infective / inflammatory, tumoral and congenital categories. Ultrasonography (USG) especially endovaginal USG (EVS) and magnetic resonance imaging (MRI) are probably the best imaging modalities for studying infertile females in addition to hysterosalpingography. However, hysterosalpingography (HLA) is still the gold standard as it is not only diagnostic but also a therapeutic technique. To assess the relative role of USG and MRI in detecting causes of female infertility To compare the relative accuracy of USG and MRI in detecting causes of female infertility using hysterosalpingography as a gold standard technique. Twenty-five females presenting with infertility were included in the study. Females with primary amenorrhea were excluded. All the patients included in the study underwent transvaginal & transabdominal USG and MRI pelvis on the same day. 3D USG and color / power Doppler study was included in USG examination. All the patients who revealed positive imaging and clinical findings were taken for hysterosalpingography within one week of imaging. USG & MRI are equally accurate in detecting polycystic ovaries. MRI is more accurate than USG in detecting tubal disease and in detecting & determining the extent of pelvic inflammatory disease. MRI is parallel in accuracy to HLA in detecting anomalies of tubes, adnexa & ovaries. USG and MRI are highly accurate in detecting uterine anomalies and in detecting endometriosis, adenomyosis, endometrial hyperplasia and leiomyoma when compared with HLA. The nature of endometrial hyperplasia (hormonal / infective) can be better assessed with HLA. Both USG and MRI are useful adjuncts to HLA in studying the infertile females. USG is primarily the first line of investigation followed by MRI and HLA.

#### Role of High-Resolution Ultrasonography (HRUS) in Imaging

**Rajul Rastogi, Yash Hospital & Research Center, Kanth Road, Civil Lines, Moradabad, Uttar Pradesh, India**

Ultrasonography (USG) is a very useful imaging modality used to study different systems of the body. When it is used to study the superficial structures of the body using high-frequency transducers, then it is known as high-resolution USG. High-resolution USG (HRUS) is a useful technique used to study the different parts of the body including eye, salivary glands, thyroid gland, scrotum, breast, joints, etc. Endovaginal USG (EVS) and Transrectal USG (TRUS) are other specialized types of HRUS. Pictorial presentation on the utility of HRUS was made by the author. HRUS is very useful imaging modality to study different part / systems of the human body.

#### Total Body Irradiation -Technique, Physical and Implementation aspects

**R.Ravichandran, J.P.Binukumar, C.A.Davis, Zakia Al Rahbi, A.M.Zahid, Rajan Balakrishnan, Department of Radiation Oncology, Royal Hospital, Muscat, Oman.**

Total body irradiation (TBI) is used as a preparatory cyto-reductive conditioning regimen prior to bone marrow transplantation (BMT) for the management of various types of leukaemia, malignant lymphoma and aplastic anaemia. TBI is also used in the treatment of systemic malignant spread and bone pain due to metastases. Co-60 gamma rays and 6MV x-rays are commonly used for this purpose. The total body irradiations (TBI) or hemi-body irradiation is a special radiotherapeutic technique that delivers in a patient's whole body a uniform dose within +10% of the prescribed dose. For bone marrow transplants (BMT) the more stringent requisites for TBI treatments are 1) The dose delivery should include skin to 100% dose 2) The dose uniformity in the entire body should be within + 10%. 3) There is need for clinical dosimetry to document the dose delivered to various parts of the body 4) Also there should be method for shielding critical organs such as lungs, kidneys etc. to keep their absorbed doses within permissible limits. At our centre, the technique followed are Clinac 600 CD linac with gantry at 270o, collimator at 45o provides magna field of diagonal dimension 224 cm at 4.0M FSD. An acrylic beam spoiler screen of 2M x 0.7M x 0.15M dimensions, mounted on mobile stand was fabricated locally. A dedicated treatment table operated by DC motor forms the patient support assembly to be used with the beam spoiler. A dose rate of 100 MU/min in the linac can provide 6.7cGy/min at 4.0M FSD. The prototype beam spoiler along with a self-designed additional flatness filter provided near perfect flat beam with intensities 100.4% (Maxm), 99.4% (Mimm) with flatness 100.2+0.5%. Entrance doses at skin is 100% as per specifications. Clinical dosimetry with humanoid phantom measurements showed delivered doses within +5%. With these data we got approval for the radiotherapy technique protocol and taken up the procedure during 2012. We standardized a method for lung shielding for lateral positioning of the patients. However we found that patient lying supine is comfortable and facilitates provision for eye shielding if necessary. The arms kept in the sides gives good compensates for extra transmission of lungs. For achieving homogeneity, method to use Perspex plates is acceptable. Both semi-conductors and thermoluminescent dosimetry performed for the patients showed the need for correction of skull bone thickness and also showed homogeneity in dose within 5% limits. Our experience is presented.

#### Evidence based medicine in day to day radiology practice.

**(Brig) Amarjit Singh, Amit Kharat, Dr D Y Patil Hospital and Medical College, Pimpri, Pune-18 Maharashtra, India**

Radiologists come across unusual cases in day to day modality practice. After encountering unusual imaging findings, radiologists need to check literature and perform the right search to achieve final diagnosis. To check literature the radiologists need to place the right questions, describe the lesion while making note of its unique character and contrast enhancement patterns if any.

Evidence based medicine provides the framework to ask the right questions and reach an adequate diagnosis on the basis of the imaging findings. The usual protocol to be followed will include; identifying the problem,

searching for answer and covering the knowledge gap by searching the literature and finally assigning the level of evidence against the searched article. Evidence based radiology is transforming radiology practice. Radiologists often look towards the internet as a basis of learning. The huge availability of the research material though well know medical search indices and journals make approaching information on the web a extremely quick and rewarding exercise.

#### Diagnostic Evaluation of (Pregnant) Patient With Acute Abdominal Pain. The Role of Imaging Modalities.

*Naser Malas, Imad Athamneh, Consultant, Obs & Gyn., Royal Medical Service, King Hussain Medical Centre, Jordan*

The objective was to assess the pregnant patient with other causes of pain not related to pregnancy presenting to emergency department, using different imaging modalities and to review the basic principles of radiation safety.

During 18 months, 55 pregnant patients were referred randomly from emergency department for evaluation of abdominal Pain prospectively enrolled into our study. Pregnant with pregnancy-related causes such as premature contractions and other related causes were excluded. US evaluation for all patients including a careful search for gall bladder kidneys, pancreas and appendix related causes. Clinical, surgical, and/or imaging follow-up data were obtained in some patients.

Out of 55 patients, 28 (50.90%) were confirmed to have an eight with gall bladder stones (14.54%) five with hydronephrosis related to pregnancy (9.08%), two of renal calculi (3.63%) one had bowel obstruction and pancreatitis (1.81%). Seven with pyelonephritis (12.72%), and four with pancreatitis (7.27%).

There is an increased incidence of acute abdomen during pregnancy though clinical pictures sometimes get blunted due to gravid uterus.

Early diagnosis followed by surgical intervention if needed decrease morbidity for both mother and fetus also enhances our knowledge of the principles of radiation safety .

#### A prospective study on evaluation of clinically negative axilla by ultrasound in patients of carcinoma breast

*Prof. Navneet Kaur, UCMS & GTB Hospital, University of Delhi, Delhi, India*

Axillary nodal involvement is the most important prognostic correlate of survival. ALND is considered the gold standard for lymph node status assessment. However recent trend favors less radical surgery ( Sentinel Node Biopsy) with similar survival rates.

**Objective:** To examine the diagnostic accuracy of axillary sonography for detection of nodal metastasis, with an attempt to identify the best parameters for the same. This prospective study was conducted at UCMS & GTB hospital, Delhi. All patients with a proven carcinoma breast underwent preoperative axillary USG followed by Modified Radical Mastectomy / Breast Conservation Surgery with axillary lymph node clearance. Histopathological correlation was done with USG finding to calculate sensitivity, specificity, Positive Predictive Value & Negative Predictive Value of axillary USG

A total of 34 patients were enrolled in the study. Sensitivity of clinical examination was 36.8%. The sensitivity of ultrasound was calculated to be 94.7%. Most sensitive criteria was a size more than 10mm. Round appearance of the lymph node was identified as most specific among the significantly associated criteria. Combination criteria of loss of fatty hilum and round shape of node was identified as superior to others with a sensitivity of 63.2% and specificity of 86.7%.

#### Conclusion

Axillary sonography is a non invasive investigation with high rates of sensitivity and specificity. It can identify node positive patients with clinically negative axilla who require axillary clearance. Patients diagnosed with node negative breast cancer after axillary USG may be planned for SNB/ axillary sampling.

#### Clinico-pathological profile of Benign breast conditions in Indian women: a prospective study based on Aberrations of normal development and involution (ANDI) classification

*Prof. Navneet Kaur, UCMS & GTB Hospital, University of Delhi, Delhi, India*

Benign conditions of the breast ( BBD) are very common, but a great deal of confusion exists in their nomenclature, classification, and, treatment protocols. Aberration of normal development and involution (ANDI) classification provides a comprehensive framework which correlate clinical presentation with pathogenesis. However most clinical studies have not used this classification system.

To study the spectrum of BBD in Indian patients with reference to the ANDI, and perform a clinico-pathological correlation .

This prospective study was carried out on 262 consecutive patients, attending the Surgery department on outpatient basis for BBD

**Results & Discussion:** There were 199 (76%) patients with a diagnosis of benign breast disorder, and 44 (17%) with benign breast disease. Non ANDI and other conditions were 19 (7%). The spectrum of Benign breast disorders included fibroadenoma 77, mastalgia with nodularity 98, galactocele 7, cysts 4 and nipple discharge ( ND) 13. Benign breast diseases included giant / multiple fibroadenomas 18, incapacitating mastalgia and nodularity 13, subareolar abscess with mammary fistula 7, periductal mastitis with suppurative 4 and ND 2. Cytopathological correlation performed in 115 patients showed non proliferative disease in 82, proliferative disease without atypia in 19, proliferative disease with atypia in 3, and miscellaneous 11.

**Conclusion :** ANDI is a comprehensive system of classification, which allows clinico-pathological correlation. An important finding of this study was the identification of a small group of patients in the entire spectrum of BBD, with atypical proliferative changes who are at a higher risk of developing cancer.

#### Significance Of Loss Of E-Cadherin/B-Catenin Adhesion Complex In Hpv-16 Associated Cervical Squamous Cell Carcinoma

*Rath Gayatri, Jawanjal Poonam, Salhan Sudha2, Dhawan Indrani3, 1Department of Anatomy,*

*2Department of Obstetrics & Gynecology, 3Department of Histopathology, Vardhman Mahavir Medical College & Safdarjung Hospital New Delhi-110029, India.*

**Introduction:** The E-cadherin/β-catenin system of adhesion molecules play a crucial role in the maintenance, integrity and morphology of the epithelium. Loss of these proteins lead to the activation of cell signaling pathways and tumor development.

**Objective:** To determine the clinical significance of E-Cadherin/β-catenin complex and the activation of Wnt/b-catenin pathway in HPV-16 associated Squamous Cell Carcinoma (SCCs) of cervix.

**Methodology:** The HPV-16 infection was detected in 132 SCCs (FIGO stage Ib-IV) by genotype specific multiplex PCR amplification. The same cohort was then immunohistochemically detected for the expression of E-cadherin and b-catenin. The immunopositivity of the proteins was also correlated with known tumor variables.

**Results & Discussion:** All the 132 (100%) cases showed the presence of HPV-16 infection in their genome.

On the immunohistochemical analyses, 53.03% cervical tumors showed the loss of membranous E-cadherin while, 39.39% of cases revealed its cytoplasmic expression. The 78.03% of cases was observed with the loss of membrane bound b-catenin, whereas, it's cytoplasmic stabilization and nuclear accumulation were observed in 46.21% and 56.81% of SCCs respectively. The downregulation of both membranous E-cadherin and b-catenin was significantly associated with tumor size (p=0.021; p=0.001) and stage (p=0.01; p=0.05). In addition, the nuclear b-catenin was also significantly associated with tumor size (p=0.001), tumor stage (p=0.031) and lymph node involvement (p=0.03). Membrane loss of E-cadherin showed significant positive association with membranous b-catenin (r=0.575, p=0.0001) and inverse association with cytoplasmic (r=-0.383, p=0.0001) as well as nuclear b-catenin (r=-0.529, p=0.0001) respectively. Interestingly, we also noticed the significant association between nuclear b-catenin and HPV-16 infection (p=0.05,  $\chi^2$  test).

**Conclusion:** Loss of E-Cadherin/β-catenin cell adhesion complex as well as activation of Wnt/b-catenin pathway in HPV-16 associated cervical cancer, suggest that, E-cadherin loss promotes tumorigenesis by effectively releasing membrane bound b-catenin into the cytosol, there by stimulating WNT signals, which is effectively required by HPV-16 to induce cervical malignancy.

#### Risk factors associated with low Bone Mineral Density among women in Ajman, UAE

*Tarek Fawzy<sup>1</sup>, Jayadevan Sreedharan<sup>2</sup>, Jayakumar Muttappallymalil<sup>3</sup>, <sup>1</sup>Department of Radiology,*

*GMC Hospital, Ajman, UAE, <sup>2</sup>Research Division, Gulf Medical University, Ajman, UAE*

Osteoporosis is the thinning of bone tissue and loss of bone density over a period of time. **Objectives:** To ascertain the determinants associated with (LBMD) among women above 30 years of age in Ajman, UAE.

**Methodology:** This Descriptive study was conducted over a period of two years. Factors considered in evaluating the presence of osteoporosis included age, gender, exposure to sunlight, style of clothing, physical activity, BMI, family history of osteoporosis and reproductive history. Data was analyzed using SPSS 19 version. **Results and Discussion:** The results of DEXA scan of 374 women revealed that 61.5% were with low bone mineral density (LBMD). Of which, 5 of them were with severe osteoporosis, 79 with osteoporosis, and 140 with osteopenia. When age is considered, the risk was high in the age group 70+ (Crude OR=7.7), 60-69 years (Crude OR=4.4), 50-59 years (Crude OR=3.6) and 40-49 years (Crude OR=1.4). Participants who had less exposure to sunlight had four times higher risk of developing osteoporosis. With regard to physical activity 1.7 times more risk was noticed among those without any physical activity as compared to those with some physical activity. With regard to duration of menopause, 1.1 times higher risk was observed for unit increase of the duration of menopause. Number of pregnancy also observed as a risk factor for LBMD. **Conclusions:** Lack of physical activity, inadequate exposure to sunlight, duration of menopause and number of pregnancy were identified as the major risk factors associated with low bone mineral density.

#### Does Cord Blood of Thyroid Stimulating Hormone, T3 and T4 Levels in Infants Differ in Different Modes of Deliveries? A Comparative study

*Naser Malas JBOG<sup>2</sup>, Ibraheem Ayad JBOG<sup>3</sup>, <sup>1</sup>Department of Radiology, GMC Hospital, Ajman,*

*UAE, <sup>2</sup>Research Division, Gulf Medical University, Ajman, UAE*

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#### Tuberculous Pleural Effusion: A study on 250 patients

*Pankaj Bansal, School of Medical Sciences Research, Sharda University, Noida, UP, India*

The average prevalence of all forms of tuberculosis in India is estimated to be 5.05 per thousand, prevalence of smear-positive cases 2.27 per thousand and average annual incidence of smear-positive cases at 84 per 1,00,000 annu-ally. Tuberculosis is a common cause of pleural effusion in India. Recent studies of populations with a high prevalence of tuberculosis report that tuberculous pleural effusion occurs in approximately 30% of patients with tuberculosis. **Objective:** To report our experience of 250 patients with tuberculous pleural effusion. **Method:** 250 patients suffering from tuberculous pleural effusion were included in the study. Thor-ough history taking and physical examinations, radiological findings, hematological and serum biochemical profiles were recorded. Pleural aspiration and biopsy were also performed. At least two pieces of pleural tissue were taken and one piece of each sample of pleural tissue was cultured for mycobacteria and the rest was sent for histological examination. Macroscopic findings, cytological, microbiological and biochemical analysis of pleural fluid were analyzed. Main symptoms noted were fever, cough and breathlessness, followed by chest pain. Blood count mainly revealed lymphocytosis. ADA and LDH were raised in almost all cases. 2 (0.8 %) patients had bilateral pleural ef-fusion and 43 (17.2 %) patients had associated parenchymal lesion. All patients responded well to anti-tubercular treatment alongwith steroid and thoracostesis. The definitive diagnosis of TB pleural effusions depends on the demonstration of M tuberculosis in sputum, pleural fluid, or pleural biopsy specimens. Supportive evidence includes demonstration of classical TB granulomas in the pleura and elevated ade-nosine deaminase (ADA), lactate dehydrogenase (LDH) and alkaline phosphates levels in pleural fluid. Pleural fluid analysis can be an important tool in patients of pleural effusion.

#### Clinical-Epidemiological Profile of Laboratory Confirmed Cases of Influenza A H1N1, at Government Medical College and Hospital (GMCH), Chandigarh, India

*V. Siddharth, V. Goyal, V.K. Koushal, S. K. Gupta, All India Institute of Medical Sciences,*

*Department of Hospital Administration, Ansari Nagar, New Delhi, INDIA*

In April 2009, a new strain of influenza virus A H1N1, commonly referred to as "swine flu" began to spread in several countries around the world. India confirmed its first case on May 16th 2009, a man travelling from New York via Dubai and Delhi tested positive for the H1N1 influenza virus in Hyderabad. A retrospective study of epidemiological characteristics were descriptively analysed using data of influenza AH1N1 screening center and influenza AH1N1 isolation ward from May 2009 to April 2010 at Government

Medical College and Hospital, Chandigarh. **Results & Discussions:** In, GMCH a total of 365 patients were sampled, out of which 29.58% (108) were found to be positive and there were 54 admission in Influenza A H1N1 isolation ward out of which 54.9% (28) succumbed to it. Influenza A H1N1 cases gradually increased starting from the month of July to maximum in month of December. Maximum cases were detected in patients less than 40 years of age which accounted for 81.4% (44 cases) cases. Most common symptom was fever (87.6%), cough (49.77%), sore throat (27%) and breathlessness (23.9%). 28 (77.7%) deaths were reported in Influenza A H1N1 patients, 46% (12) deaths occurred within 48 hours of admission, of which 7 deaths occurred within 24 hours. Single death was reported in pregnant female. On the basis of study finding it can be safely hypothesized that prevalence of influenza A H1N1 is high in younger population and fever, cough & sore throat are the most common symptoms with which the patients usually present.

#### Detection of Staphylococcal Enterotoxins in Synovial fluid of Seronegative Rheumatoid Arthritis patients

**Ramezan Ali Ateeq, Gholam Hossein Alishiri**, Department of Rheumatology, Faculty of Medicine, Baqiyatallah University of Medical Sciences, Tehran, IR Iran.

Experimental evidence suggests that staphylococcal superantigenic enterotoxins are involved in arthritis. The aim of this study was to detect staphylococcal enterotoxins in synovial fluid of seronegative rheumatoid arthritis patients. In this study, 50 synovial fluid samples from patients with seronegative rheumatoid arthritis were analysed. A commercial sandwich-enzyme immunoassay for the detection of Staphylococcus aureus enterotoxins SET A, B, C, D and E were used. The samples were separately processed by Amicon Ultrafiltration system. Electrophoretic analysis was performed. The results were confirmed by western blotting test. The results indicated that, more than 60 percent of the synovial fluid samples of the patients with seronegative rheumatoid arthritis has at least one of the staphylococcal enterotoxins. Based on our study, the most abundant enterotoxin seen in the synovial fluid of patients with rheumatoid arthritis were enterotoxins A, C, E, B and D respectively in order of presence. Meanwhile, bacteriological assay was negative for Staphylococcus aureus isolation. This finding lead us to consider for provide a new test method to diagnosis of rheumatoid arthritis and was designed based on the specific treatment of disease. In addition, these findings suggest that, detection of Staphylococcal enterotoxins in synovial fluid as a new biomarker can help identify causes and select specific treatment options.

#### Evidence based Lab practices and paradigm of antimicrobial resistance

**Neelam Tanuja**, Additional Professor, Medical Microbiology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Antimicrobial agents are one of the greatest innovations of the 20th century, which have saved countless lives and caused tremendous reduction in morbidity associated with infectious diseases. However, the widespread use and misuse of these invaluable agents has led to emergence of many potentially untreatable multi drug resistant superbugs which threaten to take the world back to the preantibiotic era of 1930s. Diagnostic microbiology services have come a long way since the time of Robert Koch and Louis Pasteur, but still are heavily dependent on conventional culture and identification systems which may take a minimum of 2 days to give antimicrobial susceptibility and identification to the clinician to make some sense of the report and institute the right antimicrobial treatment. Providing evidence for infection is currently the "Achilles heel" of global efforts to combat infectious diseases and the menace of antimicrobial resistance. Role of evidence based treatment is well established, however role of evidence based diagnosis is less defined. Evidence based lab medicine in microbiology service aims at the conscientious, explicit and judicious use of current best evidence in making the decisions about the individualized patient care, here translated as the proper usage of antibiotics for the right indication, in the right dosage, for the right duration and deescalation to narrow spectrum antibiotic. At our tertiary care hospital, in spite of having the best microbiology services, in a recent survey, out of 957 patients, microbiological confirmation was sought only for 73 patients. Over one third of the patients had no clinical evidence of infection. This over-use and underutilization of the lab services has many reasons: lack of availability of rapid tests, lack of virological diagnosis, difficulty to differentiate colonization from infection, tendency to treat syndromically and fear of bacteriological infection in the mind set of the clinician, cost of the test, the inherent delay in reports, and lack of awareness of the utility of the tests offered to name some. While the developed nations may struggle with too much testing, situation at district health level is even worse with no microbiological setup available at many places across India and other developing nations.

Many illnesses like respiratory tract infections and gastroenteritis have frequent viral etiology but are wrongly treated with antibiotics. Rapid tests based on technological advances in metabolomics, proteomics and genomics are the need of hour. Some of the examples are matrix assisted laser desorption/ionization-time of flight Mass spectrometry (MALDI-TOF) for rapid identification of bacteria on the basis of mass and electric charge on surface proteins, real time PCR platforms, chip technology and biofluidics. Cost of new technology may be prohibitive. Under strong economic and technological pressures, it is essential for administrators and all decision makers to understand the full spectrum of activities and benefits laboratory medicine can provide.

The true impact of lab medicine can only be achieved by adding value to lab tests, not in terms of only monetary issues but also by their effectiveness in management of patients and related outcomes like the emergence of antimicrobial resistance.

#### Decreased susceptibility to antimicrobials among Shigella flexnerii isolates in Manipal, South India- A 5 year hospital based study

**Mamatha Ballal, Rituparna Chakraborty**, Dept of Clinical Microbiology & Immunology Kasturba Medical College-International center Manipal-576104 INDIA

Shigellosis is responsible for high degree of morbidity and mortality in high risk populations. Severe forms may require anti-microbial treatment. However, emergence of multidrug resistance has made the selection of antimicrobials complicated. Resistance to fluoroquinolones has been in rise especially in Asia. Objective: Present study was undertaken to determine any change in isolation and serotype switching of Shigella and monitor their antimicrobial resistance over a 5 year period (2006-2011), and compare with our previous study (2001-2006). A total of 2100 faecal samples from patients with diarrhea were processed (2006-2011). Isolates identified by standard microbiological techniques as Shigella spp. Disk diffusion method for antimicrobial susceptibility performed using CLSI guidelines. Of the 2100 samples, 77(3.66%) were Shigella spp. Further predominance of Shigella flexnerii was noted over the other serogroups. 3 out of 77 Shigella were S sonnei and one S dysenteriae. 100% resistance was noted against Nali-dixic acid and significant increase in resistance seen with Ampicillin(100%), Co-trimoxazole(89.6%), Tetracycline(84.4%), Ciprofloxacin (87%) and Norfloxacin (83.1%). Decrease in resistance noted against aminoglycosides. However Shigellae were susceptible to third generation cephalosporins. Isolation of Shigella species in our study was less (3.66%) in comparison to previous study (2001-2006) (5.7%). Shigella flexneri was the

predominant serogroup (94.8%) and Shigella flexneri 2a the frequently isolated in our study. This was in synchrony with our previous study and studies elsewhere. Two isolates were resistant to cephalosporins and this is an alarm signaling the emergence of cephalosporin resistance in this region of the country. Antibiotic treatment is recommended for shigellosis as it reduces the duration, severity, excretion of organisms and prevents lethal complications. Increase in fluoroquinolone resistance leaves us only with third generation cephalosporins. But emerging resistance to cephalosporins as evidenced from our study is a serious cause of concern for the medical fraternity.

#### Values for Health Care Professionals

**S. Viswanathan**, Rajah Muthiah Medical College Hospital Annamalai University, Annamalainagar, Tamilnadu, India

In the modern era of medicine, with all the developments in bioinformatics and technical aspect going ahead and where all health professionals forget their inner values of well being and most of them are very stressed out. Objective was To identify and apply core values in health care. Bring new vitality to our practice by reflecting on these values. Assist others to rediscover their own personal values Theme of the presentation Holistic Approach, Empowerment through encouragement, Positivity, Growth Mindset, Knowing Power Within. The Lecture and Practical modules which is experiential developed with 5 core values, 5 principlesto care ourself, 8 keys of excellence and 7 tools of life. Facilitative methodology is used for deeper understanding. 5 Core values : Peace, Positivity, Co-operation, Valuing Yourself and Compassion, 5 Principles : Proper Exercise, Proper Breathing, Proper Diet, Positive Attitude and Relaxation, 7 Tools : Going Within, Imagination, Play Cool & Efficient, Innovative, Active Listening, Growth Mindset & Appreciative Inquiry, 8 Keys of Excellence : Practical Skill for bliss and success. Purpose of the Module Physician Heal Thyself -Self Care, Learning from Experience -Experience "Inner", Relevance to Work "Reflection". Conclusion: Values in health care give participants the opportunity of exploring in depth some values which are particular importance in health care practice. The main premise of values in health care is that in developing a conscious values based approach and rediscover their own peacefulness, think more positively and act with compassion and co operation. While putting their own self care at the centre of their efforts.

#### Student-Led Seminars as a teaching-learning method- evidence for a modified format

**Kadayan G. Gomathi, AhmedShaafiq, Venkatramana**, Department of Biochemistry, Gulf Medical University, Ajman, UAE, Dean, College of Medicine, Gulf Medical University, Ajman, UAE.

Objectives were to (i) modify SLS to a new, more interactive and student-centered format that would align better with the learning outcomes and (ii) assess student perceptions regarding the SLS sessions. SLS was redesigned, into a presentation followed by quiz format, to make it more interactive and student centered. Students were seated in teams during the whole session. Students were assessed on their own seminar presentation as well as team performances in the quizzes after the seminars. The new format was implemented midway in year I. Student perceptions regarding SLS sessions in the new and the old formats were surveyed using an anonymous questionnaire and scored using a likert-like scale. Statistical significance (p < 0.05) was tested using the Wilcoxon signed ranked test and the Mann-Whitney U test using the PASW19 software. Significantly higher number of students in the new format of SLS reported 'Seminars encourage me for self learning', 'I gained new knowledge in the seminars', 'I enjoyed learning through seminars', 'I understood the topic when presented by my colleagues', 'I learnt new things from my colleagues in the seminar group' and 'I enjoyed working with my colleagues for my seminar'. The new format was significantly more interesting, interactive, fun and made them feel more like a team. High number of students reporting 'improvement in communication skills', 'learnt to make a formal scientific presentation' and 'gained self confidence after presenting the seminar'. Conclusions: Since the main use of SLS as a teaching-learning method in GMU is to inculcate self-learning, peer-learning and communication skills, the new format is significantly better at achieving the outcomes.

#### Leptospirosis-A Cross Sectional Study

**V.Padma, N.N.Anand, S.M.Rajendran**, Sree Balaji Medical College, Chrompet, Chennai, TamilNadu, India.

Leptospirosis is caused by infection with bacteria of genus Leptospira and affects humans as well as other mammals, birds, amphibians and reptiles. The infection is commonly transmitted to humans by allowing water to be contaminated with animal urine which comes in contact with cuts in skin, eyes, mucous membranes. This study is a cross sectional study of 100 patients infected with leptospirosis. The aim of the study is to analyse the clinical features, find out the different serotypes causing infection, complications seen in different types. 100 patients with fever with leptospirosis positive MAT tests over a period of one year were enrolled in this study. A detail history was taken and lab investigations were done. Patients with other infections were excluded from the study and the results were analysed. Among the 100 patients there were 60 female and 40 male patients. The mean age of females infected was 38.1333 and the mean age of males infected was 35.2750. Of the different serovars of leptospirosis, I.copenhageni infected 43% of patients, Louisiana infected 27%, I. valbuzzi infected 18%, Bratislava infected 9%, I. icterohaemorrhagica infected 2% and I. bataviae infected 1% of patients with leptospirosis. Dark field microscopy also showed 23 patients with I.copenhageni, 13 patients with Louisiana, 9 patients with I. valbuzzi, 4 with Bratislava, 2 with I. icterohaemorrhagica and 1 with I. bataviae to be positive. Patients with I. valbuzzi had more thrombocytopenia. Patients with I.copenhageni and Louisiana had raised liver transaminases and had nausea and vomiting as their presentation. The most serious of all the serovars prevalent I. icterohaemorrhagica had the worst prognosis. Of the 2 cases one patient had DIC with multiorgan dysfunction and died. The other patient had renal failure which after 5 dialysis recovered completely. Leptospirosis is a biphasic disease, and begins with a flu like symptoms. After the first phase resolves the second phase begins with liver disease, renal failure and meningitis. Vasculitis may occur causing edema and potentially DIC, myocarditis, meningitis and uveitis. Complications include respiratory distress, acute renal failure and liver failure. Early diagnosis and treatment would prevent complications and death. Though I. icterohaemorrhagica is not very common it causes serious life threatening complications which can be prevented by early diagnosis and effective treatment.

#### Breast Cancer and the Heart

**Nicole P. Sandhu** Assistant Professor of Medicine General Internal Medicine Breast Diagnostic and Cancer Clinics Mayo Clinic, Rochester, MN, USA

While breast cancer is one of the commonest cancers among women, in many countries heart disease is a leading cause of death. Cardio-Oncology is an emerging multidisciplinary field of medicine that recognizes the impact of cancer therapeutics on cardiovascular health. It has been recognized for many years that certain cytotoxic agents, such as anthracyclines, are potentially cardiotoxic. In more recent years, targeted monoclonal antibody therapy using trastuzumab has been

regarded as being potentially cardiotoxic. Improved adjuvant therapy has led to significant improvements in long-term survival after treatment for breast cancer. However, these gains may come at the cost of impaired health and even survival due to cardiovascular disease.

The importance of identifying patients at risk of cardiotoxicity has become increasingly evident. While there is increasing evidence in the literature, the most reliable method(s) for risk assessment remains unclear. There is also increasing interest in risk modification but the most effective approach remains to be established. A review of the literature will be provided to familiarize the conference attendees with Cardio-Oncology as it relates to breast cancer survivors.

#### HAEMATOLOGICAL CHANGES IN CHRONIC RENAL FAILURE

**Suresh M, Chandrasekhar M, Meenakshi Medical College Hospital & Research Institute, Kanchipuram, Tamilnadu, India - 631552**

Kidney diseases is ranked – 3rd amongst life threatening disease in India, after cancer and heart disease. About 200,000 persons go into terminal kidney failure every year. Erythropoietin is the primary regulator of red blood cell formation in the bone marrow, which are mostly produced by the renal epithelial cells. During re-renal failure this erythropoietin level is decreased, which results in a fall in hematological values. This study was carried out to observe the hemato-tological changes like RBC count, Hb concentration, hematocrit, platelet count and TLC in pa-tients suffering from chronic renal failure. 50 Chronic renal failure patients blood samples were compared with 50 age and sex matched controls with inclusion criteria of age between 30 to 75 years, serum creatinine > 1.5 mg/dl, and exclusion criteria of serum creatinine < 1.5 mg/dl and patients suffering from muscular atrophy. Haematological parameters were estimated by using Beckman coulter automatic analyzer, and the serum creatinine was estimated by fully auto-tomated random access chemistry analyzer. Data were analyzed statistically by T – test and Pearson's correlation coefficient test. In chronic renal failure patients, RBC count HB concentration, hematocrit and platelet count were significantly reduced, whereas TLC was reduced but not statistically significant and serum creatinine shows negative correlation with all hematological parameters. Conclusion: Chronic renal failure patients have lower haematological indices, due to impaired production of erythropoietin, and other factors like increase haemolysis, suppression of bone marrow eryth-ropoiesis, hematuria and gastrointestinal blood loss. And the degree of changes depends on the severity of renal failure.

#### microRNAs in Rheumatic Diseases

**H S Luthra, Mayo Clinic, Rochester, MN, USA**

microRNAs (miRNA) are small non coding se-quences – approximately 21-31 nucleotides long, that have been found to play a very powerful role in control of the immune response. By binding to complementary sequences in the 3' region of the messenger RNA, can block further translation or can lead to rapid destruction. The miRNA has been found to control or accelerate the immune response and is felt to play a major role in auto-immunity. Several microRNA's have been found to be up regulated or down regulated in rheumatic dis-eases and it is felt that they regulate the immune response in those conditions. This area is of in-terest research as it would lead to newer ways to be able to monitor disease and treat it.

#### When a woman is not a woman: Problems and perplexities of Congenital Adrenal Hyperplasia

**V. Raventhiran, Professor of Pediatric Surgery, SRM Medical College, SRM University, Kattankulathur, Chennai 603203, Tamilnadu, India**

Congenital adrenal hyperplasia is an inborn error of hydroxylation enzymes in-volved in the synthesis of adrenal corticosteroids. Low cortisol levels and high androgen levels are characteristic of this disorder. As the hormonal milieu is altered even during embryonic period, female newborn with this disorder is born with male phenotype. Altered genital morphology and androgenic cortical imprinting present con-flicting clinical demands. When these individu-als are raised as females they are psychologically oriented towards maleness and when raised as males they are disabled by sexual inadequacy. Replacement therapy of corticosteroids is also fraught with the exacting demand of striking the correct balance between under and over treat-ment. Long term outcome of these individuals is not yet fully understood. Published literature on this topic is analyzed for quality of evidence and best available options are recommended for the management of these individuals.

#### Use of antibiotics in children with viral upper respiratory tract infections

**Meena K.N., Assistant Professor of Pharmacology, Rajarajeswari medical college and hospital, Bangalore, Karnataka, India**

Objectives was to analyze:  $\beta$  the pattern of antibiotic prescriptions in URTI in children aged 1 to 14 years  $\hat{a}$  the rationality of prescriptions and suggest remedial measures. After institutional ethical committee clearance a prospective, observational study of 200 out-pa-tients in paediatrics OPD according to predeter-mined inclusion and exclusion criteria was con-ducted from to . Audited Prescription was framed in Excel Sheet and percentage of drug usage was calculated. A total of 200 prescriptions were audited. The most common diagnosis was non specific URTI( 87% ). The total number of drugs prescribed were 430 in 200 prescriptions and the average number of drugs / prescription was 2.15. Older generation antibiotics were used in the hospital. Amongst antimicrobial agents, Amoxicillin was prescribed for 60 (65%) patients followed by Ce-fotaxime 11 (12%),Azithromycin 5 (5.4%), ce-phalexin 4 (4.0%), roxithromycin 2 (2.0%), Cefu-roxime 1 (1.0%), ciprofloxacin 1 (1.0%), ofloxacin 1 (1.0%), amoxicillin + clavulanic acid 1 (1.0%), ampicillin + cloxacillin 1 (1.0%), trimethoprim + sulphamethoxazol 1 (1.0%). The two ratio-nal combinations observed amongst fixed drug combinations were amoxicillin+clavulanic acid and sulphamethaxazole+trimethoprim. The combination of Ampicillin + Cloxacillin is not synergistic as cloxacillin is not active against the gram-negative bacteria and does not inhibit beta lactamase while ampicillin is not active against staphylococci. CONCLUSIONS:  $\beta$  Improper use of AMAs for viral URTI is a serious matter of concern even though most of the viral URTIs resolve spontaneously.  $\beta$  Rational prescribing messages should be promoted at national and local medical meet-ings.

#### Pemphigus Vulgaris in adolescence ; scope and challenges in management .

**Irene Nirmala Thomas, Associate Professor of Dermatology, GMC Hospital, Ajman, UAE**

Pemphigus Vulgaris is a potentially life threatening, auto immune mucocutaneous blistering disorder which affects patients between 50 – 60 years of age . Management of the disease is by various kinds of immunosuppressants and is usually lifelong. Treatment is individualized weighing the risks and benefits of the many types of immunosuppressive drugs. This article focuses on the scope and challenges involved in the management of the unusual presentation of this disease in an adolescent girl . The goal of management in Pemphigus vulgaris is to induce and maintain remission with the lowest possible doses of medication so as to minimize the risk of serious and potentially fatal side effects .A review of literature for the recent

advances in management of the disease to provide the best outcome for this patient was the objective . A systematic search for best evidence and management guidelines was performed. The treatment options based on benefits, risks, availability and cost was discussed with the patient and family. Patient was started on a conventional course of oral corticosteroids with azathioprine . Oral and cutaneous lesions healed well but patient started to develop cushingoid features. Recent evidence suggests management of Pemphigus with novel emerging therapies based on molecular mechanisms , such as Intravenous Immunoglobulin ( IVIg) and TNF-  $\alpha$  antagonists ( infliximab and etanercept) to minimize potentially serious adverse effects of the long term administration of corticosteroids. Long term corticosteroid therapy ,conventional immunosuppressive and anti-inflammatory therapies carry significant morbidity in the management of Pemphigus vulgaris Though many novel therapies appear promising, cost availability and lack of randomized controlled trials to establish their efficacy and safety is lacking.

#### Hepatic Imaging – Role of contrast enhanced MR in Focal Hepatic Masses.

**Shibani Mehra, Department Of Radiology ,Dr.Ram Manohar Lohia Hospital, Post Graduate Institute Of Medical Education & Research, Baba Kharak Singh Marg, New Delhi, India**

Contrast enhanced MRI is extremely useful in abdominal hepatic imaging for obtaining accurate diagnosis of focal hepatic masses. Technical advances in MR hardware and software have allowed introduction of faster pulse sequences and obviated motion related artifacts. The present prospective diagnostic study was done to evaluate and characterize focal hepatic mass lesions using contrast enhanced MR imaging. The aim of the study was to differentiate between benign and malignant hepatic lesions and further characterize these accurately on the basis of their patterns of enhancement. The study was conducted in the Department of Radiology and consisted of 52 patients referred from the clinical departments for suspected hepatic pathology or those who were detected as focal hepatic masses on previous ultrasonography. All patients underwent contrast enhanced Dynamic MR imaging. Delayed images were also obtained. Pathological and Surgical correlation could be obtained in 46 patient and a statistical correlation was done to categorize the diagnostic accuracy of contrast enhanced MR in hepatic imaging. The tissue characterization achieved by MR as well as the uptake of contrast by the lesions enable differentiation of benign and malignant masses and characterization of focal hepatic lesions with a high degree of sensitivity and specificity. The diagnostic accuracy of contrast MR is almost similar to that of histopathology. Dynamic contrast enhanced MRI detected benign and malignant hepatic lesions with 96% sensitivity, 92% specificity and a diagnostic accuracy of 95%. Tissue characterization of lesions was very well obtained enabling higher confidence in differentiating lesions and accurately diagnosing them. We could differentiate primary hepatocellular tumors from metastatic tumors and also successfully diagnose benign masses like adenomas, hemangiomas and focal nodular hyperplasia. CONCLUSIONS : Contrast enhanced MR is, here to upstage all current imaging modalities as it is superior to all these in assessment, accurate diagnosis and non-invasive evaluation of focal hepatic mass lesions.

#### Imaging in Female Infertility

**Rajul Rastogi, Yash Hospital & Research Center, Kanth Road, Moradabad, Uttar Pradesh, India**

Infertility is defined as the inability of the couple to achieve conception within 12 months. Approximately 10% of the couples suffer from infertility with nearly equal affection of both sexes. There are multiple causes of female infertility that are broadly divided in to uterine, ovarian & tubal causes and are further subdivided into infective / inflammatory, tumoral and congenital categories. Ultrasonography (USG) especially endovaginal USG (EVS) and magnetic resonance imaging (MRI) are probably the best imaging modalities for studying infertile females in addition to hysterosalpingography. However, hysterosalpingography (HLA) is still the gold standard as it is not only diagnostic but also a therapeutic technique.  $\beta$  To assess the relative role of USG and MRI in detecting causes of female infertility,  $\beta$  To compare the relative accuracy of USG and MRI in detecting causes of female infertility using hysterosalpingography as a gold standard technique. • Twenty-five females presenting with infertility were included in the study. Females with primary amenorrhoea were excluded; • All the patients included in the study underwent transvaginal & transabdominal USG and MRI pelvis on the same day. 3D USG and color / power Doppler study was included in USG examination; • All the patients who revealed positive imaging and clinical findings were taken for hysterosalpingography within one week of imaging.

**Results and Discussion:** • USG & MRI are equally accurate in detecting polycystic ovaries. • MRI is more accurate than USG in detecting tubal disease and in detecting & determining the extent of pelvic inflammatory disease. • MRI is parallel in accuracy to HLA in detecting anomalies of tubes, adnexa & ovaries. • USG and MRI are highly accurate in detecting uterine anomalies and in detecting endometrioma, adenomyosis, endometrial hyperplasia and leiomyoma when compared with HLA. • The nature of endometrial hyperplasia (hormonal / infective) can be better assessed with HLA. Conclusion: Both USG and MRI are useful adjuncts to HLA in studying the infertile females. USG is primarily the first line of investigation followed by MRI and HLA.

#### Total Body Irradiation –Technique, Physical and Implementation aspects

**R.Ravichandran, J.P.Binukumar, C.A.Davis, Zakia Al Rahbi, A.M.Zahid,**

**Rajan Balakrishnan, Department of Radiation Oncology, Royal Hospital, Muscat, Oman.**

Total body irradiation (TBI) is used as a preparatory cyto-reductive conditioning regimen prior to bone marrow transplantation (BMT) for the management of various types of leukaemia, malignant lymphoma and aplastic anaemia.TBI is also used in the treatment of systemic malignant spread and bone pain due to metastases. Co-60 gamma rays and 6MV x-rays are commonly used for this purpose. The total body irradiations (TBI) or hemi-body irradiation is a special radiotherapeutic technique that delivers in a patient's whole body an uniform dose within +10% of the prescribed dose. For bone marrow transplants (BMT) the more stringent requirements for TBI treatments are 1) The dose delivery should include skin to 100% dose 2) The dose uniformity in the entire body should be within + 10%. 3) There is need for clinical dosimetry to document the dose delivered to various parts of the body 4) Also there should be method for shielding critical organs such as lungs, kidneys etc. to keep their absorbed doses within permissible limits. At our centre, the technique followed are Clinac 600 CD linac with gantry at 270o, collimator at 45o provides magna field of diagonal dimension 224 cm at 4.0M FSD. An acrylic beam spoiler screen of 2M x 0.7M x 0.15M dimensions, mounted on mobile stand was fabricated locally. A dedicated treatment table operated by DC motor forms the patient support assembly to be used with the beam spoiler. A dose rate of 100 MU/ min in the linac can provide 6.7cGy/min at 4.0M FSD. The prototype beam spoiler along with a self-designed additional flatness filter provided near perfect flat beam with intensities 100.4% (Maxm), 99.4% (Mimm) with flatness 100.2+0.5%. Entrance doses at skin is 100% as per specifications. Clinical dosimetry with humanoid phantom measurements showed delivered doses within +5%. With these data we got approval for the radiotherapy technique protocol and taken up the procedure during 2012. We standardized a method for lung shielding for lateral positioning of the patients. However we found that patient lying supine is

comfortable and facilitates provision for eye shielding if necessary. The arms kept in the sides gives good compensates for extra transmission of lungs. For achieving homogeneity, method to use Perspex plates is acceptable. Both semi-conductors and thermoluminescent dosimetry performed for the patients showed the need for correction of skull bone thickness and also showed homogeneity in dose within 5% limits. Our experience is presented.

#### Accelerated Osteogenic Orthodontics (AOO) A Boon Or Bane? – A case report.

**Ravindranath Mambakkam Jagannathan**, Orthodontics Department, Rajah Muthiah Dental College, Annamalai University, Annamalai nagar, India.

Accelerated Osteogenic Orthodontics (AOO) – is a relatively new treatment in the orthodontic realm. It promises to radically shorten your time in braces with a dental surgical procedure. This technique has roots in orthopedics, dating back to the early 1900s. Only recently was it modified to assist in straightening teeth and fix bites. This case report will help you understand what AOO is, how it is done, and the pros and cons of the procedure. As such, this concept has potential for accelerating tooth movement and reducing the treatment time frame for both the patient and orthodontist. **Conclusion:** Accelerated Osteogenic Orthodontics (AOO) facilitated orthodontics was three times faster than conventional orthodontics and outcome was more stable during retention.

#### Anesthesia for bronchoscopy for neglected foreign body in a mentally challenged child

**Soumya**, Department of Anesthesia, Rajarajeswari Medical College and Hospital, Kambipura, Mysore Road, Bangalore, India

Foreign bodies in the tracheobronchial region in children show up with varied clinical presentations. Here we discuss about a neglected foreign body in a 12 year old mentally challenged child who came to us with history of recurrent chest infections, was taken up for diagnostic bronchoscopy. Outcome of the procedure was the extraction of foreign body in the left apical bronchiole. We hereby compile the anesthetic challenges faced in the form of lack of explicit history, clinically compromised patient, prolonged surgery, and unusual site and location of foreign body.

#### Diagnostic Evaluation of (Pregnant) Patient With Acute Abdominal Pain. The Role of Imaging Modalities.

**Naser Malas, Imad Athamneh**, Consultant in Obstetric & Gynecology Royal medical services/King Hussein medical centre/Jordan

The Objective was to assess the pregnant patient with other causes of pain not related to pregnancy presenting to emergency department, using different imaging modalities and to review the basic principles of radiation safety. During 18 months, 55 pregnant patients were referred randomly from emergency department for evaluation of abdominal Pain prospectively enrolled into our study. Pregnant with pregnancy-related causes such as premature contractions and other related causes were excluded. US evaluation for all patients including a careful search for gall bladder kidneys, pancreas and appendix related causes. Clinical, surgical, and/or imaging follow-up data were obtained in some patients. Out of 55 patients, 28 (50.90%) were confirmed to have an eight with gall bladder stones (14.54%) five with hydronephrosis related to pregnancy (9.08%), two of renal calculi (3.63%) one had bowel obstruction and pancreatitis (1.81%). Seven with pyelonephritis (12.72%), and four with pancreatitis (7.27%).

#### Psychological Stress A Risk Factor For Periodontal Disease- A Myth Or Reality?

**Little Mahendra**, Lecturer Rajah Muthiah Dental College, Annamalai University, India

**Objectives:** Several studies have shown significant associations between stress factors and periodontal disease. Although Police work is been ranked among the top five most stressful occupations, periodontitis and its relationship with psychological stress have never been explored. The aim of this study was to evaluate the association between Stress, Serum Cortisol level and Chronic Periodontitis in Police personnel of Cuddalore District, Tamilnadu, India.

**Methods:** In this study, 110 police personnel were grouped into Test (Group one and Group two) and Controls depending on their probing pocket depth. Control group (Probing pocket depth  $\leq$  3 mm, n = 30), Test group one (at least four sites with Probing pocket depth > 4mm and  $\leq$  6 mm, n = 40) and Test group two (at least four sites with Probing pocket depth > 6 mm, n = 40). The Clinical parameters such as Silness Loe plaque index (PI), Sulcus Bleeding Index (SBI) and Clinical attachment level were recorded. Stress was measured using Occupational stress index (OSI). Blood sample was collected and serum cortisol level was determined using Enzyme-linked immunosorbent assay (ELISA).

**Results:** The mean plaque score and sulcus bleeding index score were found to be significantly higher in test groups when compared to control group (< 0.001). The mean clinical attachment level, occupational stress index score and serum cortisol level were found to be significantly higher in test groups when compared to control group (< 0.001). Pearson's Correlation showed positive relation between clinical attachment level, occupational stress index score and serum cortisol level in the test groups whereas in controls, it was not significant.

**Conclusion:** These results suggest that the stress can be a risk factor for periodontitis, on one hand in stress the person's oral hygiene habits are altered causing accumulation of plaque and on the other it reduces the immunity of person through its endocrinal connections.

#### Thyroid Hormone Replacement – Tips and Tricks

**Sumi Bhagra**, Mayo Clinic Health System, 1000 First Dr NW, Austin, MN 55912, USA

Hypothyroidism is one of the most common endocrine disorders worldwide; yet, its clinical diagnosis remains challenging due to absence of symptoms or presence of subtle symptoms that overlap with manifestations of other diseases. This presentation will provide an evidence based review of the following issues in a clinical context (1) How to diagnose hypothyroidism? (2) How to manage hypothyroidism? (3) Who to treat and who not to treat? (4) Is there a difference between brand name and generic thyroid hormone preparations? (5) How to choose between T4 and T4+T3 combination regimens? (6) What are the guidelines for treating hypothyroidism in pregnancy? (7) What are the guidelines for treating geriatric patients with hypothyroidism?

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## Sri MANAKULA VINAYAGAR

### Medical college and Hospital

KALITHEERTHALKUPPAM, PUDUCHERRY - 605 107, INDIA

### International Conference on

## " HEALTHCARE ACQUIRED INFECTIONS AND CONTROL "

**Organizer :**  
Sri Manakula Vinayagar  
Medical college and Hospital  
Kallitheerthalkuppam, Puducherry, India.

**Dates :** 22<sup>nd</sup> & 23<sup>rd</sup> February, 2013

**Venue**  
Hotel - The SunWay GRT Grand  
Puducherry

**Co-Sponsors :**  
Healthcare Infection Society, U.K.  
Infection Control Association, Singapore  
Philippine Hospital Infection Control Society

- ❖ Healthcare acquired Infections occur among 5% to 40% of hospitalized patients in India and other developing countries leading to increased hospital stay, treatment costs, complications and mortality.
- ❖ Eminent Medical Specialists with vast experience in various aspects of Healthcare acquired Infections from different countries will deliver state of art presentations during these two days conference, related to the outbreaks, diagnosis, management and control of hospital associated Infections among patients as well as healthcare workers.
- ❖ The deliberations of this conference will be of much use to Hospital Administrators, Physicians, Surgeons, Infectious disease Specialists, Microbiologists, Postgraduate students, Nursing professionals and to others who are devoting their career to provide utmost care and safety to the hospitalized patients

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**For Further Details and Registration Contact**

**Prof. J. Shanmugam**, Chairman, " IC on HAI & Control ",  
Tel : +91 413 - 2643121 Mobile : +91 9486623094,  
e-mail : haiconsmv@gmail.com & drjshanmugam@gmail.com  
Website : www.smvmch.co.in