

**ABSTRACTS OF PAPERS PRESENTED AT THE 225<sup>th</sup>  
RESEARCH MEETING OF THE MEDICAL RESEARCH  
CENTRE OF BOMBAY HOSPITAL TRUST  
ON MONDAY 11<sup>th</sup> AUGUST 2014**

**(Convener - Dr Rajkumar Choudhary)**

1. Spectrum of ESBLs infection in paediatrics at Bombay hospital

***Parag Mahankar***

*Abstract:* Since the first report in 1980 the emerging problem of Extended Spectrum Beta-Lactamase (ESBL) producing bacteria has attained great importance due to associated increased risk of treatment failure and deaths. The pattern of acquired resistance in these micro-organisms is in constant shift, and the evolution of resistance enzymes points to a worldwide distribution of the most successful clones, but with different local, national and institutional epidemiology.

Most data on prevalence, risk factor and drug resistance of ESBLs infection are from the studies in adults. The limited pipeline of new antibiotics is particularly an issue for children as safety, pharmacokinetic data and FDA approval typically lag years behind that for adults.

We are presenting the magnitude of problem of ESBLs infection and their sensitivity pattern in paediatric population in Bombay Hospital over period of last 2 years.

2. KAP STUDY ON HPV VACCINE

***Divya H Tejuja, Sangeeta Agrawal***

*Aims and Objectives:* This is a prospective study to assess the knowledge, attitude and practices of young college girls belonging to the upper middle class society of Mumbai, regarding Cervical Cancer; its major cause i.e. HPV and its prophylaxis. The aim is to increase the level of awareness and have an impact on the mindset of young individuals.

*Material and Methods:* A questionnaire of 17 questions to find out the knowledge and attitude of the adolescent girls aged 16 to 18 years based on the major cause of cervical cancer, the prophylaxis; advantage of cervical cancer vaccination. The results will be analysed and presented.

*Conclusion:* The college girls did not have adequate knowledge and awareness about HPV infection and its impact on life. Therefore the Medical fraternity as a team needs to take adequate steps to increase the awareness about the vaccine and increase its accessibility to the target population.

3. To evaluate the usefulness of the gene xpert MTB/RIF assay for the diagnosis of tuberculosis in children in a tertiary care centre

***Rama Kumar Yelkar, Dr. Mukesh Sanklecha;***

*Background:* The rapid & accurate diagnosis of pulmonary as well as extra pulmonary tuberculosis in children remains a challenge because of the difficulty in obtaining sputum samples & the paucibacillary nature of the disease. A diagnosis of drug resistance also remains a challenge with traditional testing methods. The xpert MTB/RIF assay recommended by WHO in December, 2010

allows for the simultaneous detection of tuberculosis & rifampicin resistance in under two hours using a platform that entails fewer biosafety & human resource requirements than traditional culture & drug susceptibility testing. By enabling a diagnosis of tuberculosis & drug resistance testing almost anywhere without the requirement of specialised laboratories, skilled technician or culture that is needed for other tests, this new MTB/RIF test has the capacity to be a "game changer" in tuberculosis diagnosis

*Methods:* Data regarding gene Xpert, MGIT culture and smear microscopy results in total 30 patients upto the age of 18 years with pulmonary or extrapulmonary tuberculosis satisfying inclusion criteria over a period of 2 years will be analysed retrospectively.

*Results:* Out of 12 patients, in 4 patients(30%) gene xpert was positive when smear microscopy and MGIT culture were negative. 6 patients(50%) were negative for smear microscopy but positive with gene xpert as well as culture . 2 patients (20%)were positive with microscopy as well as culture but negative for gene xpert.

*Conclusion:* The MTB/RIF has a short turnaround time and simultaneously detects M. tuberculosis and RIF resistance in less than 3 h. Although the MTB/RIF test could be a useful tool for rapid identification of RIF-resistant M. tuberculosis, especially in smear-positive clinical samples, the test results must always be confirmed by culture .

#### 4. The invisible scar

##### **Sushmita N. Bhatnagar**

*Introduction:* Aesthetics in surgery has been rapidly evolving. The concepts of surgical incisions have been changing from the previous century when laparoscopic surgeries were introduced due to the felt need of cosmesis. The invisible scar to the children with various abdominal surgeries performed through a supraumbilical incision is presented here.

*Aim:* To evaluate the usefulness and feasibility of umbilical approach to explore the abdominal cavity in children of all ages

- a. To assess the cosmetic outcome of this approach
- b. To evaluate the complications of the umbilical approach

*Material and methods:* All children who underwent umbilical incision for diagnosis or treatment of an intra-abdominal condition during the period January 2011 to July 2014 were reviewed. Age, operative procedure, conversion to laparotomy, extension of incision, cosmetic outcome, complications, and follow-up data were recorded. Those children who had umbilical conditions such as umbilical hernia, omphalocele, gasroschisis, etc were excluded from the study as these conditions are often treated by umbilical incisions.

*Results:* Of 42 children with ages ranging from newborn to 9 years of age, there were 19 boys and 23 girls who underwent umbilical approach for diagnosis or treatment of intra-abdominal condition. The indications for surgery were as follows : Mesenteric lymph node biopsy (n=3), Intussusception (n=5), Pyloromyotomy (n=16), Pyloroplasty for gasticoutlet obstruction(n=2), excision of omental mass (n=1), neonatal atresias which include duodenal, jejeunal, ilealatresias (n=13), patent vitello-intestinal duct ligation (n=2). Conversion to laparotomy was not done in any of the patients, though the incision was extended laterally in 6 children. The complications encountered were wound infection (n=5) in the early phase of the study, no other complications were noted.

The cosmetic outcome was excellent in all the children with very satisfied and happy parents from the

post-operative phase.

*Conclusion:* Umbilical approach to intra-abdominal surgical pathologies provides excellent cosmetic outcome which is the demand of the times. Also, this approach provides good exposure to the abdominal cavity, can be extended in the direction needed and gives the surgeon the tactile sensations and feel of the tissue, is safe with minimal complications, and can be easily learnt and adopted. The aesthetic outcome with an invisible scar is even superior to the multiple scars of laparoscopic surgery.

#### **Corticosteroids and pneumonia: time to change practice**

Pneumonia is characterised by lung inflammation, with fluid filling the alveoli and preventing adequate oxygenation of the body, and can be acquired in the community or in the hospital.

Management of this disorder relies mainly on empirical antibiotic treatment, and so far no adjunct therapy is recommended. In *The Lancet* Claudine Angela Blum and colleagues report that 7-day treatment with 50 mg oral prednisone daily hastened recovery and hospital discharge in adults with community-acquired pneumonia of any severity.

The favourable benefit-to-risk ratio noted with corticosteroids in this trial is in line with findings from trials done in Egypt, Italy, Japan, the Netherlands, and Spain.

**The Lancet, 2015, Vol 385, 1484**

#### **Efficacy and Safety of Alirocumab in Reducing Lipids and Cardiovascular Events**

Alirocumab, a monoclonal antibody that inhibits proprotein convertase subtilisin/kexin type 9 (PCSK9), has been shown to reduce low-density lipoprotein (LDL) cholesterol levels in patients who are receiving statin therapy.

Patients were randomly assigned in a 2:1 ratio to receive alirocumab (150 mg) or placebo as a 1-ml subcutaneous injection every 2 weeks for 78 weeks.

Over a period of 78 weeks, alirocumab, when added to statin therapy at the maximum tolerated dose, significantly reduced LDL cholesterol levels. In a post hoc analysis there was evidence of a reduction in the rate of cardiovascular events with alirocumab.

**Jennifer G. Robinson, Michel Farnier, Michel Krempf et al, N Engl J Med, 2015, Vol 372, 16:1489**

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OCTOBER 2014**

**(Convener - Dr Rajkumar Choudhary)**

1. Effects of Different Stages of Hypertension on Overall Mortality In The Parsi Community: An Observational Study

**Amitkumar Pande, Nadir Bharucha, Aksha Endigeri**

*Background:* Uncontrolled hypertension (HT) is an established risk factor for the development of vascular diseases. Prevalence varies in different communities and no such study has been conducted in the Parsi community living in Bombay, India. The 25 year follow up study attempts to determine the effects of different stages of hypertension on overall mortality rate in the community.

*Method:* We used a 1 in 4 random selection of subjects who were  $\geq$  20 years of age. A questionnaire was administered and the blood pressure (BP) was measured by a doctor. HT was defined as diastolic blood pressure (DBP)  $\geq$  90 mm Hg  $\pm$  systolic pressure (SBP)  $\geq$  140 mm Hg. Isolated systolic hypertension (ISH) was defined as SBP  $\geq$  160 mm Hg with DBP  $<$  90 mm Hg. Subsequently, we reanalysed the data using current definition of ISH as SBP  $\geq$  140 mm Hg with DBP  $<$  90 mm Hg.

*Results:* 2879 subjects  $\geq$  20 years of age were randomly selected of which 2415 (84%) participated in the study. The final results to be tabulated.

*Conclusion:* there is a definite linear relationship between long term mortality and severity of hypertension in the Parsi community. Increased mortality associated with hypertension less in the Parsi community as compared to others. In our study women have increased relative mortality associated with HT as men. Optimal control of BP with therapy decreases long term mortality.

2. Electrodiagnosis Clinches Diagnosis

**Alika Sharma, Aarthika Sreenivasan, K A Mansukhani**

Electrodiagnostic tests are useful for localising a lesion along lower motor neurons, especially when the presenting symptoms are non specific or resulting from several possible etiologies. The role of electroneuromyography is primarily to provide objective evidence to substantiate clinical diagnosis/differential diagnosis.

We present 2 interesting and rare cases, which on electrodiagnosis revealed completely different diagnosis from those suspected clinically along with an unusual clinical sign.

3. Tolperisone hydrochloride: A novel alternative in three cases of Stiff Person Syndrome

**Abhinay M. Huchche, S. V Khadilkar**

*Introduction:* Stiff person syndrome (SPS) is a rare disease. Sedation often limits the dosage of medicines used. Tolperisone is a centrally acting muscle relaxant, which exerts its spinal reflex inhibitory action via pre synaptic inhibition of voltage-gated sodium and calcium channels; making it

a logical option for symptomatic relief of SPS. Moreover, it is non-sedating and has fewer adverse effects. Tolperisone use has not been reported in SPS.

*Materials and Methods:* Three consecutively admitted cases of SPS have been described with respect to their clinical profile, investigations and response to various medications.

*Results:* Case 1 and Case 2 responded to diazepam, but over time became sleepy. Both tolerated tolperisone at this juncture. Case 3 received tolperisone as the first agent in view of previous experience of response in first two cases; she responded well.

*Discussion:* Tolperisone acts at a different site independent of GABA, which makes it non-sedating and allows combination with benzodiazepines.

#### 4. Unusual cases of intracerebral haemorrhage

**Vaibhav S. Chavan, M.P. Chaudhary, K.E. Turel**

Classical intracerebral haemorrhage (ICH) occurs in gangliocapsular region, typically in hypertensive patient who may be on blood thinners. Classical ICH is usually treated conservatively unless mass effect is life threatening. The usual outcome is severe permanent morbidity. Over the years we have experienced some patients who have suffered intracerebral bleed in unconventional sites that warrant identification and treatment of the cause of such bleeding, besides saving life.

We are presenting two such cases of unusual intracerebral bleed:

*Case 1:* A young lady who underwent gamma knife treatment for right parietoccipital A.V.M. 1.5yrs prior to presentation and was brought to us within minutes of bleed in unresponsive state with dilated pupils.

*Case 2:* A 70 year old male had acute large left temporo-occipital haematoma and was brought in comatose state with G.C.S. of 3/15 and left dilated nonreacting pupil. Due to its nonconformal location we did further tests (CT angio and DSA) which revealed a high flow dural AVF, which could not be embolised owing to the other pupil also getting dilated.

Both patients were subjected to emergency craniotomy, evacuation of haematoma, bone flap removal & treatment of cause of bleeding with excellent post operative outcome. It is important to distinguish these hematomas from the classical ones as the cause of former is treatable and the outcome is promising.

#### 5. Management of Aneurysm in a case of Poly Cystic Kidney Disease

**Ashwin Pai, Suneel Shah**

Adult polycystic kidney autosomal dominant type, house progressive renal function, deterioration over first few decades of life leading to chronic renal failure. Hypertension is a common sequel.

There is increase incidence of aneurysm in those patients, 15 % by reasonable estimate and there appears to be an increased chance of rupture.

*Case:* - Our case, 26 year old female, k/c/o ADPKD, with chronic renal failure [creatinine of 2.3 and GFR = 35ml/hour] presented with complaints of severe headache associated with episode of vomiting and one episode of loss of consciousness about four days back. MRI done revealed arachnoid haemorrhage present in right sylvian fissure. MR Angiogram showed 5 × 3 mm aneurysm at level of middle cerebral artery infarction.

Patient underwent Right Pterional Craniotomy followed by clipping of aneurysm. Post operative, patient had good recovery with no worsening of neurological deficits.

The aim of the case presentation is to highlight the constraints faced in management of aneurysm in ADPKD patients and ways to overcome it.

#### 6. Tarlov cyst - A report of three cases

**SubodhPatil, C E Deopujari, V S Karmarkar**

Perineurial (Tarlov) cysts are meningeal dilations of the posterior spinal nerve root sheath that most often affect sacral roots and can cause a progressive painful radiculopathy. Tarlov cysts are most commonly diagnosed by lumbosacral magnetic resonance imaging and can often be demonstrated by computed tomography myelography to communicate with the spinal subarachnoid space. The cyst can enlarge via a net inflow of cerebrospinal fluid, eventually causing symptoms by distorting, compressing, or stretching adjacent nerve roots. It is generally agreed that asymptomatic Tarlov cysts do not require treatment. When symptomatic, the potential surgery-related benefit and the specific surgical intervention remain controversial.

Although most remain asymptomatic throughout the patient's life, the natural history of symptomatic Tarlov cysts is one of progressive enlargement leading to increasing symptoms. The hydrostatic and pulsatile forces of CSF cause Tarlov cysts to grow over time. As the mass enlarges, sensory nerve root filaments are stretched over the periphery of the lesion or are compressed against adjacent bone or other nerve roots, causing pain or other sensory disturbances.

We describe the clinical presentation, treatment, and results of surgical decompression in two cases of a symptomatic sacral Tarlov cyst & third patient awaiting surgical management. We will review the medical literature, describe various theories on the origin and pathogenesis of Tarlov cysts, and assess alternative treatment strategies in brief.

#### **Screening tests for tuberculosis before starting biological therapy**

Biological drugs are associated with an increased risk of progression from latent to active tuberculosis.

Before starting treatment, exclude active tuberculosis by asking about symptoms (such as cough, fever, weight loss, and night sweats) and possible exposure to or history of tuberculosis, and with a chest radiograph.

Check for latent tuberculosis with the tuberculin skin test or an interferon release assay; a combination of both tests may be the most sensitive approach.

**Richard Hewitt, Marie Francis, Aryan Singanayagam, Onn Min Kon, BMJ, 2015, Vol 350, 31**