

**Editorial**

During the last two months you must have been busy attending some of the numerous ‘medical conferences’ which were held in the city. Every other Association is keen to hold one. Conferences held in 5 star venues attract larger number of delegates as do conferences which are heavily subsidized. The aim of a medical conference is basically to discuss the ongoing research and current data, stimulate discussion, introduce new and breaking updates in the field, discuss case studies, new approaches and methods in the relevant areas of interest. Today, “money spinning’ is the name of the game, be it through sponsorship of lectures, stalls or whatever. In fact conferences are so much driven by pharma and other companies that I came across at least two talks which were doctored to suit the needs of the sponsor and this indeed is a bad trend which should be condemned and nipped in the bud!

Included in this issue are the salient points of the Global initiative on asthma (GINA) new global strategy for asthma management and prevention(2006)and some of the recent advances in the field of neurosurgery , spine surgery and diabetology. .

**Dr. Ramesh Subramanian**

**Pg 1**

**TODAY’S CHILDREN, TOMORROW’S WORLD”**

Yes its true!. 43 percent of all cancer cases can be prevented! February 4 is World Cancer Day – acknowledging the increasing impact of cancer on people around the world and efforts to improve cancer prevention, treatment and care. The date was declared ‘World Cancer Day’ to mark the anniversary of the first World Summit Against Cancer in Paris in 2000, at which a global charter against cancer was launched. The International Union Against Cancer (UICC) – a Geneva-based NGO – and its cancer-fighting member organizations in over 80 countries will launch the campaign on World Cancer Day.

The 2007-2008 World Cancer Campaign – “*Today’s Children, Tomorrow’s World*” – aims to spread information and share knowledge about actions and technologies from lifestyle behaviors to and a groundbreaking vaccine for cervical cancer to underscore prevention in fighting cancer. Targeting parents, healthcare professionals and policy decision-makers, the global campaign will feature messages sharing a common theme: prevent cancer in adults by focusing on behavior and appropriate vaccination during childhood. Emphasis will be on four main cancer-causing factors: tobacco use, unhealthy diet and obesity, infections that may cause cancer, and overexposure to damaging sunlight. The four key messages of “*Today’s Children, Tomorrow’s World*” are:

- Provide a smoke-free environment for children ("no smoking in homes")
- Adopt an energy-balanced lifestyle, be physically active, exercise regularly, avoid obesity, eat well
- Learn the facts about vaccines that can prevent certain forms of cancer
- Be sun-smart – avoid over-exposure to the sun and sunburn

With the fight against cancer at a turning-point, UICC member organizations around the world will join to together in putting forth a simple life-saving message: actions now for today’s children can shape a healthier tomorrow’s world.

*UICCWorldCancerCampaign , uicc.org*

**Pg 2**

**GLOBAL STRATEGY FOR ASTHMA MANAGEMENT AND PREVENTION (GINA 2006)**

- Global initiative on asthma (GINA) new global strategy for asthma management and prevention(2006) bases its asthma management strategy on three levels of control: Controlled, Partly Controlled, or Uncontrolled. This is a departure from the 2002 strategy, which was based on disease severity
- By emphasizing control, the new strategy recognizes that asthma management should be based not only on the severity of the underlying disease but also on the patient's response to treatment. Furthermore, severity is not an unvarying feature of an individual patient's asthma but may change over months or years
- The previous classification of asthma by severity into intermittent, mild persistent, moderate persistent, and severe persistent is now recommended only for research purposes
- A theme continued from the 2002 report is that medications to treat asthma can be classified into controllers (medications taken daily on a long-term basis to maintain control) and relievers (used for a short time to relieve symptoms)
- Inhaled glucocorticosteroids are the most effective controller medications currently available. Other controller options include leukotriene modifiers and sustained release-theophylline
- Other key changes within the guidelines include:
  1. Treatment should be adjusted in a continuous cycle depending on the patient's level of control:
    - Assessing asthma control
    - Treating to achieve control
    - Monitoring to maintain control
  2. Treatment should be stepped up when control is lost then brought back down when control is achieved
  3. Measurement of airway variability is key to both asthma diagnosis and the assessment of asthma control
  4. Effective management of asthma requires the development of a partnership between the person with asthma and his/her health care professionals (and parents/caregivers in the case of children with asthma)
  5. Long-acting B2-agonists must only be used in combination with an appropriate dose of inhaled glucocorticosteroid. Long-acting oral B2-agonists alone are no longer presented as an option for add-on treatment at any step of therapy, unless accompanied by inhaled glucocorticosteroids
  6. Although most people with asthma should be able to reach and maintain asthma control, some patients with difficult-to-treat asthma may be unable to achieve the same level of control.
  7. Special considerations are required in the diagnosis and treatment of children with asthma who are five years of age and younger

**GLP-1, INCRETIN MIMETICS AND DPP 4 INHIBITORS:  
NEW WAYS IN THE TREATMENT OF TYPE 2 DIABETES**

The incretin hormone glucagon-like peptide 1 (GLP-1) is produced by post-translational processing of the proglucagon gene in intestinal L-cells. Owing to its glucose-dependent insulinotropic effect, a potential in the treatment of type 2 diabetes has been suggested already 20 years ago. However, rapid enzymatic inactivation of GLP-1 in vivo and the need for parenteral administration have obviated its earlier therapeutic application. In addition to its effects on insulin secretion, GLP-1 suppresses glucagon secretion, decelerates gastric emptying and increases satiety leading to reduced food intake and weight loss. In the light of these features, GLP-1 appears to be an ideal candidate for the treatment of type 2 diabetes. Today, a number of different GLP-1 analogues or derivatives (the so called "incretin mimetics") with more favourable pharmacokinetic profiles have been generated. Exenatide (Byetta; Eli Lilly & Co), a synthetic GLP-1 receptor agonist suitable for twice daily s.c. injection, has now been approved by the FDA for the add-on therapy of patients with type 2 diabetes with insufficient metabolic control during metformin and/or sulfonylurea treatment. A number of other incretin mimetics are currently being studied in clinical trials. An alternative strategy to enhance the action of endogenous GLP-1 is inhibition of its enzymatic

degradation by specific inhibitors of the protease DPP 4 (DPP 4 inhibitors- Liraglutide ), which are absorbed after oral ingestion. Reductions in HbA1c-levels during treatment with incretin mimetics and DPP 4 inhibitors were in the order of 0.5-1 %. Major advantages of using incretin mimetics compared to other antidiabetic drugs available include the lack of a risk for hypoglycaemia due to the strict glucose-dependence of insulinotropic and glucagonostatic GLP-1 actions as well as weight reduction by several kg despite their insulinotropic mode of action. Therefore, incretin mimetics and DPP 4 inhibitors seem to be useful new tools for the future treatment of type 2 diabetes.

*Meier, Juris J.<sup>1</sup>; Nauck, Michael A.<sup>1</sup> Current Medicinal Chemistry - Immunology, Endocrine & Metabolic Agents, Volume 5, Number 6, December 2005, pp. 485-497*

### **QUIZ MANIA 62**

**An adult patient presented with shortness of breath. The X ray is shown below. What is the diagnosis?**



### **ANSWER TO QUIZ MANIA 61**

#### **Warthin's tumour**

*Editor's note:*

Warthin's tumor (papillary cystadenoma lymphomatosum) is the second most common benign parotid gland tumour accounting for 4% to 11% of all salivary gland tumours.. It is an adenoma in which epithelia form multiple cysts. It is accompanied by a proliferation of lymphoid tissue. The presence of lymphoid tissue within the tumour makes it susceptible to inflammation, leading to enlargement of the tumour , pain and tenderness. Removal with a margin of normal tissue leads to a very low rate of recurrence

### **SAD DEMISE**

MR. R.K.Swamy of Balaji Advertising, Chembur passed away suddenly following a cardiac arrest in the U.S. in the first week of January 2007.

He was associated with the INCHES Bulletin ever since the first issue published in August 2000 and also with the five volumes of the INCHES Companion.

Mr. Swamy had done his GDart and was among the first to be trained in Computer Graphics which he also taught. He was a master at work. A well wisher of INCHES, he was a person whom we could count on. In his death, I have personally lost a good friend and a 'guru' He is survived by his wife and two daughters.

RIP.

*Dr. Ramesh Subramanian*

**Pg 3**

### **RECENT ADVANCES**

#### **NEUROSURGERY:**

***INTRA OPERATIVE MAGNETIC RESONANCE IMAGING- Brain SUITE***



- Brain SUITE is an integrated neurosurgery system that allows for more precise treatment of complicated tumors in sensitive areas of the brain
- BrainSUITE is the latest advancement in image-guided surgery, providing real-time views of the tumor site with intraoperative magnetic resonance imaging (iMRI)
- It is a fully integrated open-bore MRI system with a 70-centimeter magnet, which can accommodate large or obese patients as well as those positioned on their side for surgery
- Currently, MRI is done before and after surgery to confirm successful tumor removal. However, the brain often shifts during surgery due to fluid and tissue loss, which can affect the treatment field. BrainSUITE's imaging systems provide a highly detailed view of the tumor site by rotating the patient bed into the MRI machine during surgery
- Neurosurgeons can update the images at any time to check their work before finishing the procedure, allowing them to:
  - Remove as much tumor as possible
  - Protect critical areas of the brain
  - Compare intraoperative MRI images with image-guided surgery systems
  - BrainSUITE may also help reduce complications and the need for further surgeries.
- While it has potential for most neurosurgery patients, BrainSUITE will be particularly useful for:
  - Primary brain tumors
  - Metastases to the brain
  - Meningiomas
  - Pituitary tumors
  - Pediatrics
  - Skull base tumors



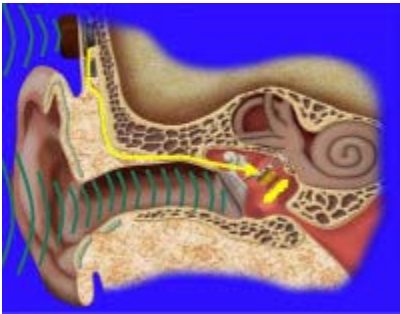
**SPINE SURGERY:**  
***DISC ARTHROPLASTY***



- Disc arthroplasty is an emerging treatment for patients with disc degeneration.
- The theoretical advantages of disc arthroplasty include
  - Maintenance of range of motion
  - Avoidance of adjacent segment degeneration
  - Reconstitution of the disc height and spinal alignment

- Maintenance of mechanical characteristics
- Decreased surgical morbidity compared with fusion
- Avoidance of complications from instrumentation or postoperative immobilization
- To allow an early return to function
- In some cases, it is thought that pain relief may be greater with motion preservation than by fusion.
- Cervical arthroplasty is indicated for the treatment of radiculopathy and myelopathy at one or two levels Cervical disc prostheses. include , Prestige., Bryan. and Prodisc C.
- Lumbar arthroplasty is performed to manage chronic severe disabling discogenic low back pain isolated to one or two levels that has failed a minimum of 6 months of nonoperative therapy.<sup>1</sup>
- Prostheses are now available that may maintain motion and theoretically correct spinal segment dysfunction. Lumbar disc prostheses. include SB Charité III. Prodisc II. **and** Maverick.
- There are a wide variety of designs and materials used, the effect on long-term performance of these differences being unknown.
- Early complications appear manageable and not life threatening and, in fact, are lower than those reported for fusion procedures. Failure modes are yet unknown, although subsidence and device breakage have rarely occurred.
- Two reassuring observations have been noted: no significant short-term effect of wear debris and good biologic fixation.

#### **ENT: VIBRANT SOUNDBRIDGES**



For patients with moderate to severe sensorineural hearing loss a new implantable device the Vibrant P (programmable) and HF (high frequency) are used. Soundbridges (Symphonix) work by increasing the amplitude of natural ossicular vibration. They achieve this through a floating mass transducer attached to the long process of the incus (The transducer, a hermetically sealed titanium bobbin wrapped in gold wire, contains a magnet (the floating mass) that moves back and forth according to the frequency and amplitude of the sound signal. It is driven by an electronic processor unit, which is connected to it by a fine wire. The processor unit modulates an electrical signal delivered by a receiver implanted in the skull just behind the ear. The external component of the system is held on the side of the patient's head by a magnet and concealed behind the hairline. It contains a microphone, battery, and the electronics to convert sound energy into a signal that can be transmitted to the internal receiver. Because this device directly drives the ossicular chain, auditory feedback is eliminated. Furthermore, the ear canal is not occluded by a mould.

**Pg 4**

**Medinews**

**TENOR RISK SCORE PREDICTS HEALTHCARE NEEDS IN SEVERE, DIFFICULT ASTHMA**



A novel risk scoring system is a clinically useful tool for determining the likelihood of asthma-related hospitalization in adult patients with severe or difficult-to-treat asthma, US researchers report. The predictive tool, derived from The Epidemiology and Natural History of Asthma: Outcomes and Treatment Regimens (TENOR) study, is based on clinical variables that can be obtained purely from medical records, without any patient input. Early identification of patients at increased risk of adverse outcomes and a better understanding of beneficial interventions can help to reduce subsequent healthcare use among this group. Components of the TENOR risk score that remained predictive following multivariable analysis were: younger age (18-34 years); female gender; non-White race; body mass index  $\geq 35$  kg/m<sup>2</sup>; post bronchodilator forced vital capacity <70% predicted; history of pneumonia; diabetes; cataracts; intubation for asthma; and three or more short-term steroid dose increases in the prior 3 months. Points were assigned to categories within each component according to their associated frequency of hospitalization or ED visits, leading to a possible range of 0-18. Dividing the scores into three groups, the authors report that the moderate risk score value (5-7) reflects a 3.5-fold higher risk of an ED visit or hospitalization, and a high score ( $\geq 8$ ) reflects a more than 12-fold increased risk, relative to patients with a low risk score (0-4). Commenting on their findings, the researchers say that the TENOR risk scores could prove to be of general use among all asthmatics for the identification of a subset at higher risk of healthcare use. *Eur Respir J* 2006; 28: 1145-115

### **BOTULINUM TOXIN - A IMPROVES SYMPTOMS ASSOCIATED WITH MYELOMENINGOCELE**



Intravesical injection of botulinum toxin type A (BTX-A) is effective in managing neuropathic bladder and bowel dysfunction in children with myelomeningocele, according to a report in the November *Urology*. The efficacy of BTX-A was evaluated in the treatment of 26 children with detrusor hyperreflexia caused by myelomeningocele that was unresponsive to other medical treatment and required intermittent catheterization. The mean incontinence score 4 months after intravesical injection of BTX-A into the detrusor muscle improved from 2.5 to 0.3, the authors report, and 19 of the 26 patients became completely dry between intermittent catheterizations. Average maximal detrusor pressure decreased and mean maximal bladder capacity increased significantly after the procedure, the results indicate, and mean vesicoureteral reflux grades decreased from 1.7 before the procedure to 0.7 4 months after the procedure. Though most patients had experienced repeated urinary tract infections, the researchers note, there were no urinary tract infections during the follow-up study. Moreover, fecal incontinence and the need to wear diapers to prevent fecal soiling improved considerably after BTX-A treatment, the report indicates. Neuropathic bowel dysfunction resolved completely in 8 patients (53%) and improved moderately in 2 patients (13%).

*Urology* 2006;68:1091-1097.

Know the drug  
**Know the drug**

### **IMIDAPRIL HYDROCHLORIDE**

It is a new generation selective ACE inhibitor.

**Mechanism of action:**

- Inhibits activity of ACE in the blood and on vascular wall, thus suppress formation of angiotensin II and degradation of bradykinin.
- This activity is much higher than earlier compounds with resultant high antihypertensive effects and low incidence of cough

**Indications:**

- Essential hypertension
- In hypertensive patient with renal impairment
- Type 2 Diabetic Nephropathy

**Dosage and administration:**

- Available as 5mg. / 10mg. Plain tablet
- Dose: 5-10mg. once daily.
- However in severe hypertension, hypertension with renal disorder or renal parenchymal hypertension, initial dose is 2.5mg.

**Contraindications:**

- History of hypersensitivity to any of the ingredients of the drug
- History of angioedema to any ACE inhibitors
- Patient who has to undergo haemodialysis with AN69 sodium membrane
- During pregnancy

**Precautions:**

Careful administration in patient

- With unilateral or bilateral renal artery stenosis
- With hyperkalemia
- With renal dysfunction
- With cerebrovascular disorder
- If patient has to work at heights or operating hazardous machinery
- Within 24 hours prior surgery
- In elderly start with a lower dose
- In lactating woman, if essential to give this drug, feeding should be stopped.

**Drug interactions:**

- Potassium sparing diuretics; serum potassium levels may rise.
- Lithium carbonate; action increased due to accelerated re-absorption in renal tubules
- NSAIDs: effect of this drug may be reduced

**Adverse Reactions:**

- Cough
- Hypotension
- Dizziness and light headed
- Rash and angioedema
- Thrombocytopenia