

**Epilepsy Foundation presents iSTART'15 Program Under aegis of Neuro-rehab Subgroup of Indian Academy of Neurology & Indian Federation of Neuro-rehabilitation: Scientific program supported by Allergan – Scientific program Update**

**Date: 25th to 26th July, 2015; Venue: The Lalit Mumbai, Sahar Airport**  
**Day 1: 25 July'15, Saturday**



**Pathophysiology of spasticity by Dr. M. M. Mehndiratta**



**Highlights:**

- 1 Defining and re-defining spasticity by Sherrington, Nathan, Lance and Young
- 2 Spasticity is caused due to the imbalance of excitatory and inhibitory

impulses resulting in a disinhibition of the alpha motor neuron.

3 Hyper-excitability of the lower motor neuron is presumed to be the cause of spasticity.

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### Management of spasticity by Dr. U. Meenakshisundaram



#### Highlights:

- How Physiotherapy is the cornerstone of spasticity management.
- How Botox helps in management of spasticity by acting motor and sensory levels by:
  - ✓ Alpha & gamma motor neuron inhibition
  - ✓ Ia afferent reduction
  - ✓ Nociceptors/Pain pathway
  - ✓ C and A delta fibers (group III and IV)

### Spasticity modifying factors and management of spasticity by Dr. Nirmal Surya



#### Highlights:

- 1 MDT or multidisciplinary team approach is the key in spasticity

management.

2 Modified Ashworth scale along with the Modified Tardieu scale and a goal oriented approach and active functional assessment are the most valuable scale in spasticity management.

3 The advantages, hazards, aggravating factors, functional consequences of spasticity

4 Common oral medications and the efficacy of various anti-spasticity drugs in specific populations

5 The goals of management and how a step ladder approach is integral in the management of spasticity.

### **Botulinum Toxin in the Management of Neurogenic Detrusor Over activity by Dr. Sanjay Pandey**



#### **Highlights:**

1 NDO or Neurogenic detrusor over-activity is secondary to Stroke, Multiple sclerosis, Spinal cord injuries or Parkinsonism

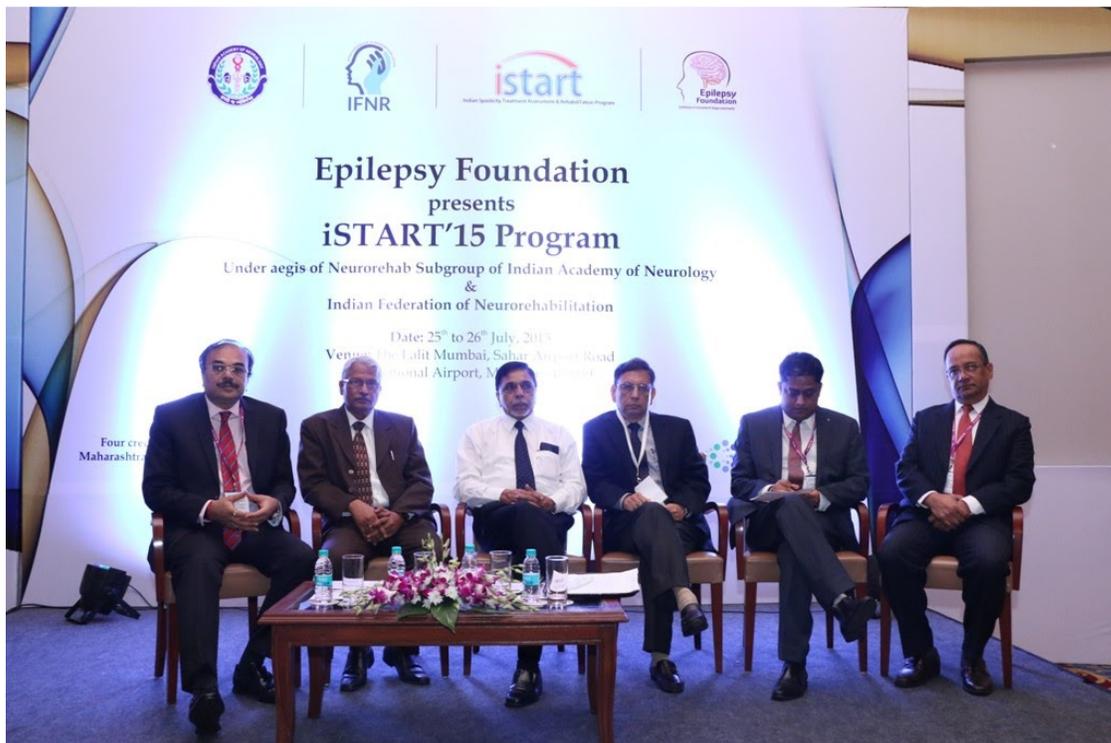
2 Anti-cholinergic failure is of the tune of 81%; lack of efficacy and side-effects being the reason for discontinuation of anti-cholinergic medications

3 Botox offers an excellent solution for NDO which is not only a quality of life disease but also high detrusor pressures have propensity for hydronephrosis, lithiasis, reflux and kidney failure.

4 Botox 200U is given in 30 intradetrusor injections of 1ml each in 30 sites in the bladder by a cystoscope, spaced 1 cm apart, at a depth of 2 mm

**Panel discussion with Dr. M. M. Mehandiratta, Dr. Sanjay Pandey, Dr. Anupam Gupta, Dr. Meenakshi Sundaram, Dr. Sanjay Chatterjee, Dr. N. R. Ichaporia and Dr. Dipti Kamble moderated by Dr. Nirmal Surya**

- 1 The treatment of choice is not physiotherapy, oral medications or Botox but all the above.
  - 2 Supportive measures – Splints, casts, orthotics are integral adjuncts
  - 3 Which method is the best for Botox administration? Surface marking, EMG or Ultrasound – all three are good choices at the convenience of the user.
  - 4 Whether to Continue the oral medications? Yes
  - 5 How early can Botox be started in a patient of stroke? As early as 2 weeks –
- Dr Nirmal Surya



**Physiotherapy and occupational therapy sessions by Dr. Geeson Arumbur and Dr. Dipti Kamble** was informative from the multi-disciplinary point of view of spasticity management.



**Assessment & Injection in Upper Limb Dr. Anupam Gupta and Dr. Hrishikesh Kumar and Lower limb by Dr. Sanjay Chatterjee and Dr. Pawan Ojha** was well received as each and every pattern of spasticity of the patient was assessed using MAS, MTS and goal attainment scales and dosage of Botox was explained and the injection technique using surface marking illustrated explicitly to the attendees.



### Highlights:

1. Pronation of the forearm can be treated by inj. Botox to Pronator Teres with 40-50U alone but in case of hyper-pronated forearm needs Pronator Quadratus as well of 25U. additional pronators contributors are Brachioradialis and Flexor carpi radialis.
2. The long flexors are injected in a clenched fist deformity with FDS for the PIP in the range of 40-50U and FDP for the DIP in the range of 40-50U.
3. Flexors of the wrist, elbow, thumb and fingers were localized accurately.
4. Which plantar flexor – gastrocnemius or soleus – contributes to the spasticity is differentiated by Silverskoid test. Silverskoid positive means gastrocnemius is the major muscle involved.
5. Tensor fascia lata injection was demonstrated.

## Goal Setting in the Management of PSS by Dr. Abhishek Srivastava



### Highlights:

- 1 It is imperative to include patient, family and carer givers as members of the goal setting team
- 2 Discussion, negotiation and agreement between treatment team and patient/family/carer on goals before commencing treatment is necessary.
- 3 Rehab goals must be SMART – Specific, Measurable, Achievable, Realistic & Timed
- 4 Botulinum toxin has been clearly shown to reduce : ✓ clinical indicators of UL spasticity ✓ symptoms (pain) ✓ passive function ✓ caregiver burden
- 5 Even though there is no limit, For practical purpose Set no more than 35 goals.

## Assessment & Injection in Upper Limb and lower limb Spasticity using EMG Guidance by Dr. Nirmal Surya



### Highlights:

- ❖ A very enlightening and informative session on accurate localization of muscles using the technique of EMG guidance. Smaller muscles of the shoulder, forearm, hand and muscles of the toes and Tib Post can accurately injected by the method of EMG guidance.
- ❖ Dr. Nirmal Surya advised young neurologist to take the technique of Botox using EMG guidance when they start using Botox.

### Ultra Sound Guided Assessment & Injection in Upper/Lower Limb Spasticity Dr. Taral Nagda and Dr. Abhishek Srivastava



### Highlights:

- ❖ A very innovative session of the use of Ultrasound guided injections using portable USG machine.
- ❖ The normal muscle anatomy and arrangement of muscles using ultrasound was well explained on a volunteer.
- ❖ Then the ultrasound guided injections were demonstrated by the in the plane and out of plane angles

**Day 2: 26<sup>th</sup> July'15, Sunday**

**Oration lecture by Dr. Ashok Johari**



**Highlights:**

1. The need for a communicating and reaching out beyond boundaries in a multi-disciplinary team is important in the management of a child with CP.
2. Botox is the drug of choice in the first decade of life for the CP child without contractures.
3. Botox also has utility even in the second decade of life.
4. Saving the hip is also top priority in the management of a child with CP as: Instability, Pain and pelvic obliquity, Loss of walking and sitting balance.
5. Treatment should relate to the child's ultimate potential.

**Dystonic Cerebral Palsy – Evaluation and management by Dr. Vrajesh Udani**



### Highlights:

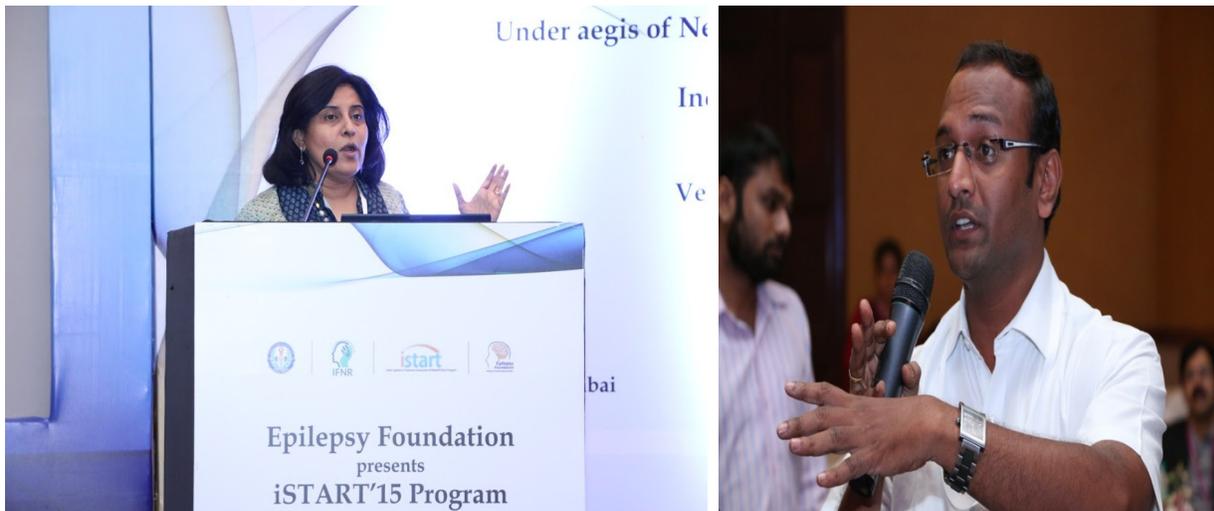
1. Explained the clues that the disease may not be CP are:

- ☐ Normal milestones
- ☐ Normal head size
- ☐ Hypotonic/spastic dystonic CP – No risk factors, normal MRI
- ☐ Hypo-reflexia

1. Medical treatments in dystonic CP were explained

2. Botulinum toxin is helpful in focal/segmental dystonia

### Occupational Therapy Evaluation by Dr. Asha Chitnis



### Highlights:

1 How to understand the role of ICF in the clinical setting

2 Behaviours are the clue and contributes of sensory processing

## Workshop on live patient assessment of CP by Dr Ashok Johari, Dr Vipul Shah and Dr Asha Chitnis



### Highlights:

1. Dr Ashok Johari's clinical assessment techniques for spasticity
2. Silverskoid test, Gracilis test, Duncan Ely tests were demonstrated to the participants

## Workshop and hands-on training of PSS patients by Dr Hrishikesh Kumar, Dr Sanjay Chatterjee and Dr Nirmal Surya



### Highlights:

- 1 More than 30 participants were given hands-on training in over 6 patients of PSS.
- 2 Techniques were demonstrated and debated in-depth.