

"Cosmetic" injection for children with spastic muscles

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Topics to cover

- What is this "cosmetic" injection?
- How does it work - physiologically and functionally?
- Result of local parents' perception
- The "miracle" injection - is it?
- How can parents get involved?

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For children with spasticity

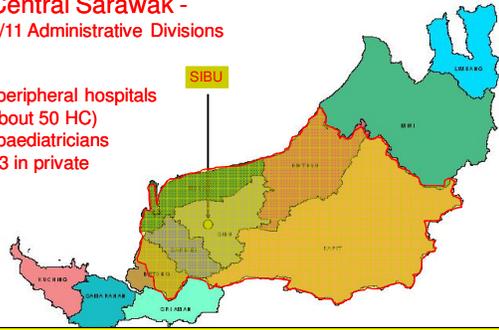


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Central Sarawak - 6/11 Administrative Divisions

8 peripheral hospitals (about 50 HC)
4 paediatricians & 3 in private



about 1/3 size of Victoria
population slightly < Adelaide

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Strategy for Change

- Morton *et al* (2004):
 - suggested that BtA treatment is safe & effective
 - could be offered at district level as part of an overall package of care for cerebral palsy
 - occasional help from regional centers for more complex case

Ref.:
Morton RE *et al. Arch Dis Child* 2004;89:1133-1137

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Introduction

- Botulinum Toxin Type A (BtA) injections for spastic muscles in cerebral palsy

first reported by *Cosgrove et al* [1] & *Koman et al* [2] in 1990s

Ref:
 1. *Cosgrove AP et al. Dev Med Child Neurol* 1994;36:386-96
 2. *Koman LA et al. J Pediatr Orthop* 1993;13:489-95

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Chemical denervation - prevents pre-synaptic Ach release
 Reversible - axonal sprouting and re-innervation

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Common Brands in Malaysia

- Botox®
- Dysport®

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Introduction

- Worldwide experience and beneficial effects:
 - physical functioning [1,2,3]
 - quality of life in childhood spasticity [1]
- Cost-effectiveness:
 - Germany: released resources for alternative use [4]
 - USA: did not add to the total cost of care compared to those without BtA treatment [5]

Ref:
 1. *Balkrishnan R et al. J Surg Orthop Adv.* 2004 Summer;13(2):76-80.
 2. *Papadonikolakis AS et al. Acta Orthop Scand* 2003; 74(6):749-55.
 3. *El-Etribi MA et al. Int J Rehabil Res.* 2004 Dec;27(4):275-81.
 4. *Ruiz FJ et al. Eur J Health Econ.* 2004 Oct;5(3):227-35.
 5. *Dickson M et al. J Med Economics* 2005; 8:85-95.

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Therapeutic Goals

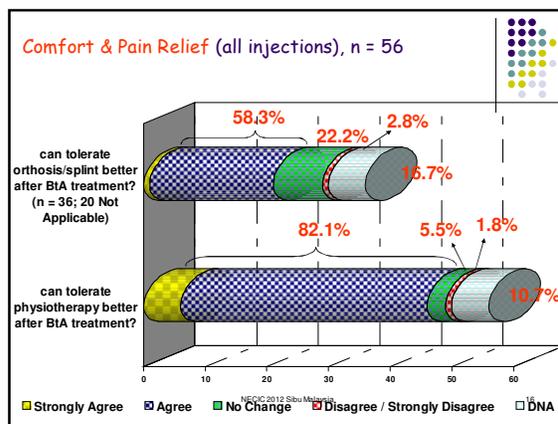
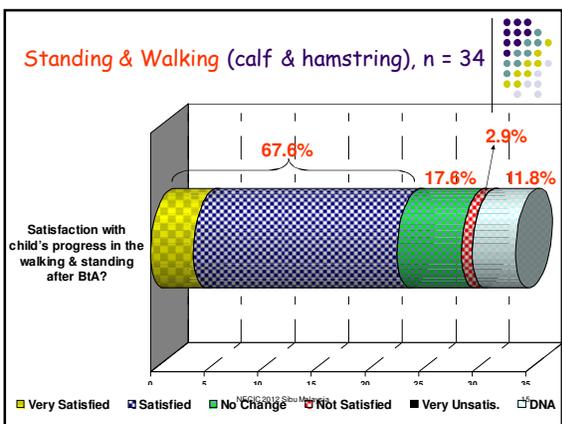
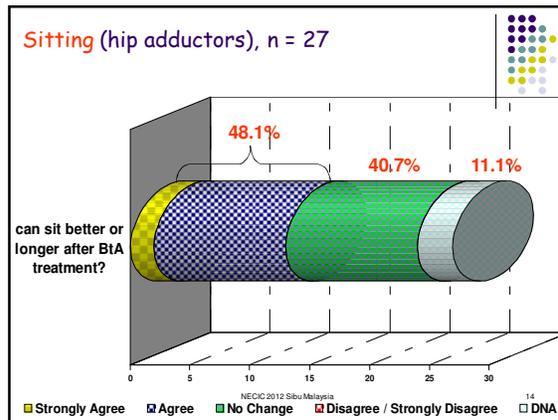
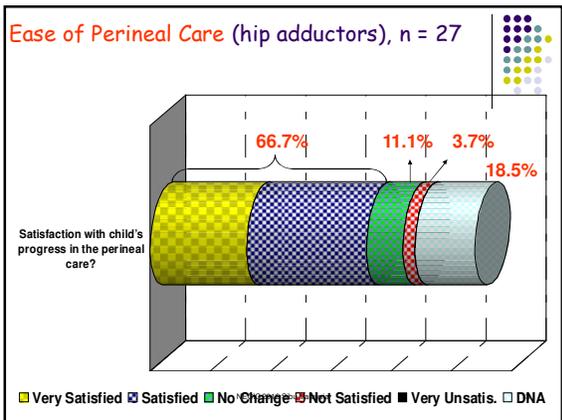
Scissoring gait
 Contracted hips
 Sitting posture
 Tip Toeing

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Goals - reduce spasticity

- Prevent joint dislocation
- Prevent muscle contracture
- - reduce pain
- - improve functions
- - better hygiene and nursing care
- - drooling

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Side Effects:

- No major side effects (weakness, urinary retention) reported
- Transient local muscles pain

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"miracle" injection is that all you need?

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The team and the duty

- Physiotherapist
- Occupational therapist
- Nurse
- Orthopaedic Surgeon
- Pharmacist

- Parents
- Child



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Combined Orthopaedic & Paediatric Clinic

The COP not the CHOP

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- Not all disease need medicine

Care is important

We do need medicine

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Home Visit & Home O₂ / Ventilation Care



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Rehabilitation & Mobility Aids

Important in rehabilitation of children with Global Developmental Delay & Cerebral Palsy




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- Support the parent to help the child
- Focus on the children and family
- Always think "outside the box" - what's more to offer

- The return is slow!

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Declaration of Interest

- Study not supported by any grant
- All BtA were purchased by Sarawak State Health Department (except first batch in 2001 donated by Non-governmental Organisation)
- Selection of Brands of BtA is dependent on Preference by Paediatric Neurologists and number of children requiring the injection in each clinic / stock available

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Are you convinced?



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Or boring...



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Thank you

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