Brachial Plexus Injury (Erb’s Palsy)

- In rare cases there can be a Horner’s syndrome and Phrenic Nerve involvement.

- The Toronto score is widely used by Physiotherapists. It is a grading system of active movement against gravity. A normal score is 10. A score of <3.5 at 3 months indicates poor recovery.

- Narakas is the other scoring system commonly used. It classifies babies into 4 groups—upper Erb’s, extended Erb’s, total palsy & total palsy with a Horner’s.

- If an MRI scan is to be performed it is best to wait for 3 months. If undertaken too soon after the injury the pseudo-meningocele at the point of nerve avulsion may be obscured by oedema.

- The risk factors for Brachial Plexus Palsy (BPI) are Shoulder Dystocia and Infant of a Diabetic Mother. If recognised during labour a McRoberts Maneuver is performed. It is effective in releasing the baby’s shoulder in 50% of cases.

- The infant is noted after birth to have reduced or absent movement of the upper limb. The condition varies widely in both extent and severity. The process is caused by stretching of the brachial plexus nerve fibres.

- The mild, common form affects the shoulder muscles C5, C6. The moderate form affects the shoulder, elbow, forearm C5, C6, C7, C8. The severe form affects the shoulder, elbow, forearm, wrist & fingers C5, C6, C7, C8, T1.

- In the examination do a Moro reflex & document the asymmetry. Record the presence or absence of shoulder flexion, elbow flexion, supination (with ability to turn the palm upwards), wrist extension and finger movements. Note these findings at each examination. Do an x-ray of the clavicle to exclude an associated clavicular fracture (pseudoparalysis).

- Seek Physiotherapy involvement at an early stage. The aim in the early stages is graded passive movements of the joints to prevent contractures. No passive shoulder movement for the first 5-7 days.

- See back at the clinic at 2 weeks of age. Note the joint movements as previously described. One would expect to see improvement in most cases at this time. Continue to see every 2 weeks over the first 6 weeks. Most cases make a quick recovery and only 10% have a residual deficit beyond 3 months of age. Recovery of Shoulder flexion & Elbow flexion are important prognostic signs. These signs should have recovered by 6 weeks. Both must recover together. If recovery is not present by 6-12 weeks refer to the specialists such as the Erb’s Palsy Clinic, CRC, Clontarf or local orthopaedic services.

- Good communication with parents is important. It is a condition that causes significant parental anxiety. The concerns are compounded by the initial uncertainty regarding outcome.

- The incidence of Brachial Plexus Palsy is 1.7 per 1000 births. 90% will have recovered or almost recovered by 6 weeks. Ten percent will not recover by 6-12 weeks and will need specialist referral.

- Nerve healing and repair is at a cellular level so careful graded movement is important starting after 5-7 days.

- Early presentation is not often indicative of prognosis.

- Infants often turn away from their affected side so plagiocephaly prevention advice is advised.

- Be aware of the potential for posterior dislocation of humeral head.
References:


This care pathway has been produced by the National Paediatric and Neonatology Clinical Programme. It is aimed at medical, nursing and allied health professionals working in Irish neonatal units.