

Patient advice sheet - Obstetric Brachial Plexus Injury

What is it?

- The brachial plexus is a network of 5 nerves coming from the neck into the arm. These nerves provide movement and feeling to the arm and hand. These nerves start in the spinal cord in the neck and are named C5, C6, C7, C8 and T1.
- It is through these nerves that the brain sends electrical signals to the muscles and skin of the arm and hand. Each nerve supplies movement and feeling to specific areas in the arm and hand.

How does Injury Occur?

- Obstetric brachial plexus palsy affects about 1 in every 200 births. It is more common in larger babies, but can occur in babies of any weight. During birth, after the delivery of the baby's head, the baby's shoulder may become stuck in the mother's pelvis. At this stage it is very important for the baby to be delivered quickly to prevent brain damage from lack of oxygen. In order to free the shoulder, a variety of manoeuvres may be used and may result in damage to the nerves of the arm. The baby may also suffer a break in the collar bone or humerus (upper arm bone) during the delivery. It is also possible for the nerves to be damaged in a breech delivery.
- If there is injury to one or more nerves of the brachial plexus they are unable to transmit the electrical signals from the brain and so the muscles that are controlled by the injured nerve will not work and the skin supplied by the injured nerve will lose feeling.
- The recovery of the nerve depends on which structures are damaged and how badly they are damaged. Recovery is difficult to predict. Most babies will recover full movement but nerve growth is very slow. Rapid return of muscle function is a positive sign. Most nerve re-growth and muscle function will occur during the 1st year. However, some muscle weakness usually remains.

Assessment and Treatment

- There is no single test which can determine the extent of the brachial plexus injury. Instead, your child's arm movement will be assessed and monitored over a period of time by a physiotherapist. The majority of children with brachial plexus injuries recover with physiotherapy alone. Approximately 10% require some surgery.
- Following birth your baby will have been assessed by a paediatrician or midwife. If any abnormalities of arm function are observed they may refer for an X-ray to check whether there are any fractures in the arm, and they will refer for a physiotherapy assessment. The paediatrician will usually arrange a follow up paediatric appointment.
- Your baby will be assessed by a physiotherapist usually within 10 working days of receiving the referral. The physiotherapist will assess your baby's active arm movement and the range in their arm joints. If appropriate the physiotherapist will give advice on handling your baby and teach arm exercises. You will

be given a leaflet with information on handling and exercises to take home. Do not start exercises until they have been demonstrated by a physiotherapist. The physiotherapist will arrange a follow up appointment to check exercise technique and review your baby's arm function.

- If the physiotherapist feels the arm function is not progressing adequately by 8 weeks they may suggest a referral to a specialist centre for assessment and to see if surgery is required.
- If your baby's arm fully recovers they will be discharged. If there is incomplete recovery the physiotherapist will continue to monitor and advise and may refer to an occupational therapist if required.

How can I help reduce healthcare associated infections?

Infection prevention and control is important to the well-being of our patients and for that reason we have infection prevention and control procedures in place. Keeping your hands clean is an effective way of preventing the spread of infections. We ask that you, and anyone visiting you, use the hand sanitiser available at the entrance to every ward before coming in to and after leaving the ward. In some situations hands may need to be washed at the sink using soap and water rather than using the hand sanitiser as hand sanitisers are not suitable for use when dealing with patients who have symptoms of diarrhoea.

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Patient Advice Sheet

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Legal Notice

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Approvals:
Paediatric Information and Guidelines Group – 7th October 2021
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