

Birth Trauma

Objectives:

By the end of this lecture, you should know:

1. Which baby is at risk for birth injuries
2. What are the types of birth injuries
3. How to diagnose and treat birth traumas

Birth injury: is defined as injury to the infant resulting from mechanical forces (such as compression or traction) during labor or delivery.

Conditions predisposing to birth injuries:

- Poor maternal health.
- Maternal age (very young & old).
- Grand multiparity.
- Maternal pelvic anomalies (contracted pelvis).
- Oligohydramnios.
- Malpresentation.
- Instrumental delivery.
- Prolonged or extremely rapid labor.
- Twins (particularly the second).
- Prematurity / LBW.
- Large fetal head
- Fetal macrosomia.
- Fetal anomalies.

Types of birth trauma

Head and neck injuries:

(A): Extracranial injuries:

Cephalhematoma:

- No treatment is required it usually resorbs within 2wk-3mo.
- Incision & drainage are contra indicated.

Caput succedaneum:

- It may extend across the midline & across suture lines.
- No specific therapy is needed

Skull fracture:

- # are either:
 - Linear # is the most common, cause no symptoms & requires no treatment.
 - Or depressed (may lead to intracranial injuries).
- If asymptomatic → no treatment.
- If symptomatic → elevation.

Sternocleidomastoid muscle (SCM) injury:

- Usually present at birth or may develop over the first 2-3 wks of life.
- Treatment: passive stretching of the muscle several times per day.
- Recovery usually occurs over 3-4 mo.

(B): Peripheral nerve injuries:

Brachial plexus injuries (brachial palsy):

(a): Erb's paralysis (Duchenne-Erb paralysis)

- The injury is limited to the 5th & 6th cervical n.

(b): Klumpke's paralysis: (rare)

- Injury to the 7th, 8th cervical n. & 1st thoracic n.
- If the cervical sympathetic fibers of the 1st thoracic spinal nerves are involved, Horner's syndrome is present (ipsilateral miosis & ptosis).

Differential diagnosis:

- a. Cerebral injury.
- b. # clavicle.
- c. #, dislocation or epiphyseal separation of the humerus.
- d. Soft tissue injury of shoulder or upper arm.

Management:

- X ray studies to exclude bone injuries.
- Delay passive movement until the nerve edema resolve (7-10 days).
- Treatment: partial immobilization & appropriate positions to prevent contracture development. (Gentle passive exercise of the limb several times a day with splinting to avoid contracture).
- If the paralysis persists (3-6 mo.) without improvement, neuroplasty, end to end anastomoses, or nerve grafting may be undertaken.

Prognosis:

- Prognosis depends mainly upon the severity of your baby's injuries.
- Mild cases of Erb's palsy may clear up within 3-6 months with physical therapy.
- Around 70 to 80% of all Erb's palsy cases will usually clear up within a year as long as proper and consistent treatment is provided.
- The younger the infant is when treatment begins, the better the results are.
- One way to determine a positive prognosis is if the infant begins to grasp objects or make fists with the hand associated with the affected area during treatment sessions.