RAMA UNIVERSITY

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# FACULTY OF NURSING

# COMMON NEONATAL DISORDERS

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# Introduction-

A wide variety of disorders affecting the newborn may originate in utero, during birth or in immediate postnatal period. These disorders may be due to prematurity, genetic, mutations, chromosomal aberrations or acquired from environment.

# 1.Common neonatal problems-

## A. Birth injury-

I. Soft tissue injury
II. Caput Succedaneum
III. Cephalohematoma
IV. Nerve injury

## B. Problems related to physiological factors-

I. Hyperbilirubinemia
II. Hypoglycemia
III. Hypothermia
IV. Hypocalcaemia

## C. Problems of Respiratory system-

I. RDS

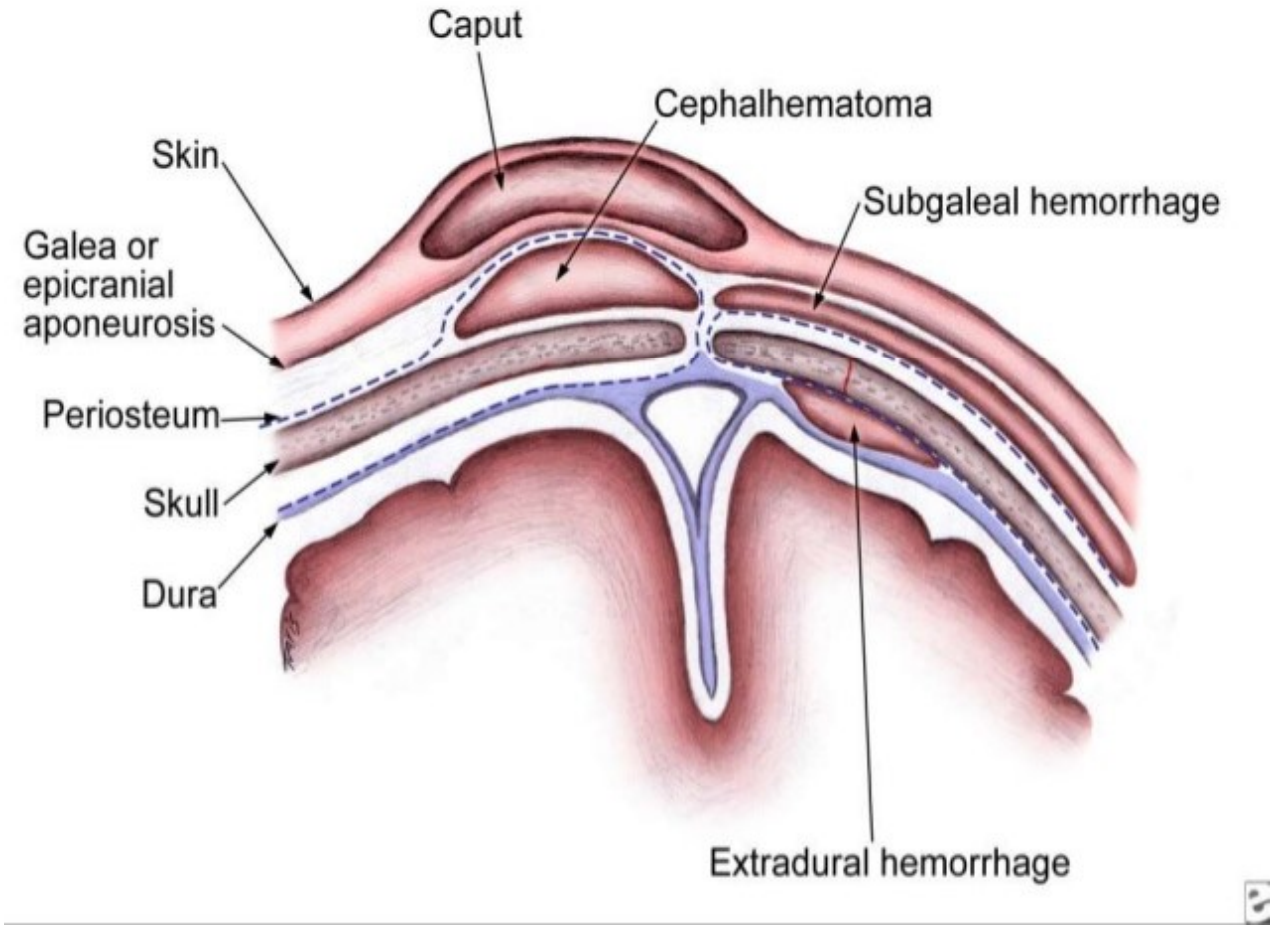
II. Meconium aspiration

## D. Neonatal Septicemia

## E. Neonatal Seizures

# SOFT TISSUE INJURIES

- Abrasions
- Erythema petechia
- Ecchymosis
- Lacerations
- Subcutaneous fat necrosis


Caput
Cephalhematoma
Skin
Subgaleal hemorrhage
Galea or
epicranial
aponeurosis
Periosteum
Skull
Dura
Extradural hemorrhage

# Injuries to the head

**CAPUTSUCCEDANEUM-**

- A caput succedaneum is an **edema** of the scalp at the neonates **presenting part** of the head.
- It often appears over the **vertex** of the newborn's head as a result of pressure against the mother's cervix during labor.
- The edema in caput succedaneum **crosses the suture lines.**

## Causes-

- Mechanical trauma of the initial portion of scalp pushing through a narrowed cervix
- Prolonged or difficult delivery
- Vacuum extraction

# Cephalohematoma-

- It is a collection of blood between the periosteum  of a skull bone and the bone itself. It occurs in one or both sides of the head.
- The swelling with Cephalohematoma is not present at birth rather it develops within the first 24 to 48 hours after birth.
- Has clear edges that end at the sutures lines.

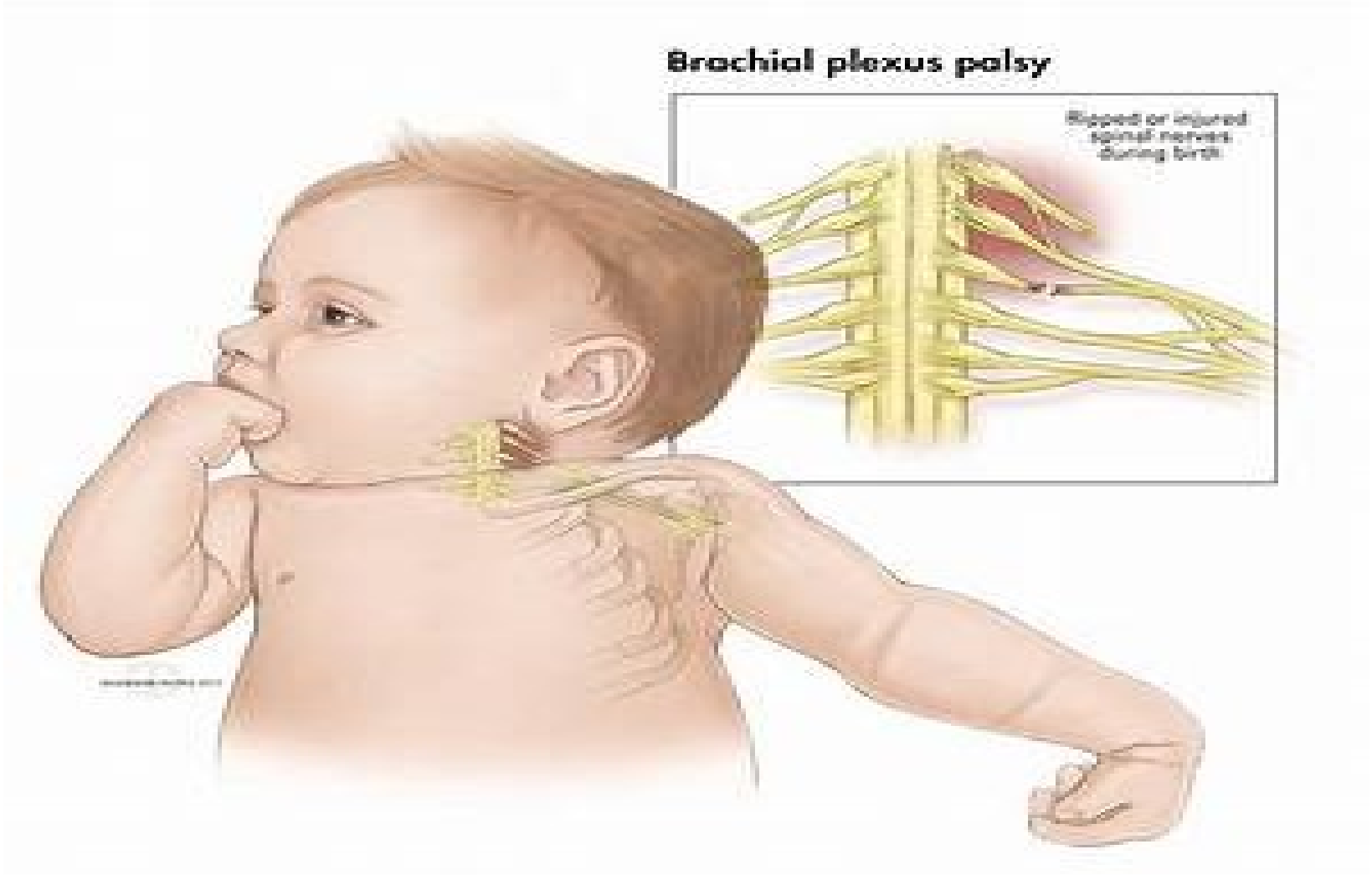
**Causes-**

- Rupture of a periostal capillary due to the pressure of birth.
- Instrumental delivery.


Subperiosteal
Hemorrhage
Cephalohematoma

# BRACHIAL PLEXUS INJURY

- Erb’s palsy
- Klumpke’s palsy
- Injury to the upper plexus
- Erb-Duchenne paralysis


Brachial plexus palsy
Ripped or injured spinal nerves during birth

# BRACHIAL PLEXUS INJURY

**Risk factors-**

- Macrosomia
- Shoulder dystocia
- Instrumental delivery
- Malpresentation

# ERB-DUCHENNE PARALYSIS

- $5^{th}$ and $6^{th}$ cervical nerve injury
- The infant loses the power to abduct the arm from the shoulder, rotate the arm externally and supinate the forearm
- Erb's palsy may also be associated with injury to the phrenic nerve which is innervated with fibers from c3-c5

# KLUMPKE'SPALSY

- Involves the C8 and T1 nerves, resulting in weakness of the intrinsic hand muscles and long flexors of the wrist and fingers.

# FACIAL NERVE PALSY (BELL'S PALSY)

Risk factors-

- Forceps delivery
- Prolonged second stage of labor

# CLINICAL MANIFESTATION-

- Weakness of both upper and lower facial muscles.
- At rest, the nasolabial fold is flattened and the eye remains persistently open on the affected side.
- During crying, there is inability to wrinkle the forehead or close the eye on the ipsilateral side, and the mouth is drawn away from the affected side.

# TREATMENT-

- Protection of the involved eye by application of artificial tears and taping to prevent corneal injury.
- Neurosurgical repair of the nerve should be considered only after lack of resolution during 1 year of observation.

# PHRENIC NERVE INJURY-

- The phrenic nerve arises from the third through fifth cervical nerve roots.
- Injury to the phrenic nerve leads to paralysis of the ipsilateral diaphragm.

# CLINICAL MANIFESTATIONS-

- Respiratory distress, with diminished breath sounds on the affected side.
- Chest radiographs show elevation of the affected diaphragm, with mediastinal shift to the contralateral side.
- Ultrasonography or fluroscopy can confirm the diagnosis by showing paradoxical diaphragmatic movement during inspiration.

# TREATMENT-

- Initial treatment is supportive
- Oxygen
- Respiratory failure may be treated with continuous positive airway pressure or mechanical ventilation.
- Gavage feedings
- Plication of the diaphragm

# THANK YOU