

INFANTICIDE

Dr. Anu Singh

Definitions:

- **Infanticide** : Killing of child who is <1 year.(IPC 302)
 - Considered as murder.
 - IPC of murder - applicable to infanticide .

- **Neonaticide** : Killing of child within 24hours of birth .
- **Filicide** : Killing of child by parents .
- **Xenocide** : Killing of whole race .
- **Uxoricide** : Killing of wife or girlfriend or boyfriend .
Killing of romantic partner .

Age of viability :

- **Age of viability :>28 weeks** – baby capable of surviving outside the uterus after 28 weeks.
- **<28 weeks** : if fetus get delivered , it is called abortion (non viable fetus).
- If fetus get delivered >28 weeks : viable - post mortem should be done .

Viable fetus

Dies
within uterus



Dead Born

Dies in
birth canal



Still born

Gets delivered
and respire at
least once ↓

Live born

>28 weeks = 7 months

- Length : 35 cm
- Weight : 900-1200 gm
- Eyelid : open at 7 months
- Pupillary membrane : disappears
- Bony centers of sternum and talus appears .

1.Features in dead born :

- R:** Rigor mortis , Robert sign
- A :** Aseptic autolysis – maceration .
- M :** mummification
- S :** Spalding signs

1. **Robert sign** : air or gas in aorta .

It's the **earliest sign** (seen within 12 hours).

2. **Maceration** : fetus become soft and flaccid .

Aseptic autolysis : fetus – surrounded by aseptic amniotic fluid .

Skin : red & peeled off.

Sweet smell.

These are **most important signs of dead born**.



3. **Mummified fetus** : seen when the amniotic fluid, air & blood supply to the fetus – compromised .

Fetus : dehydrated & sunken.

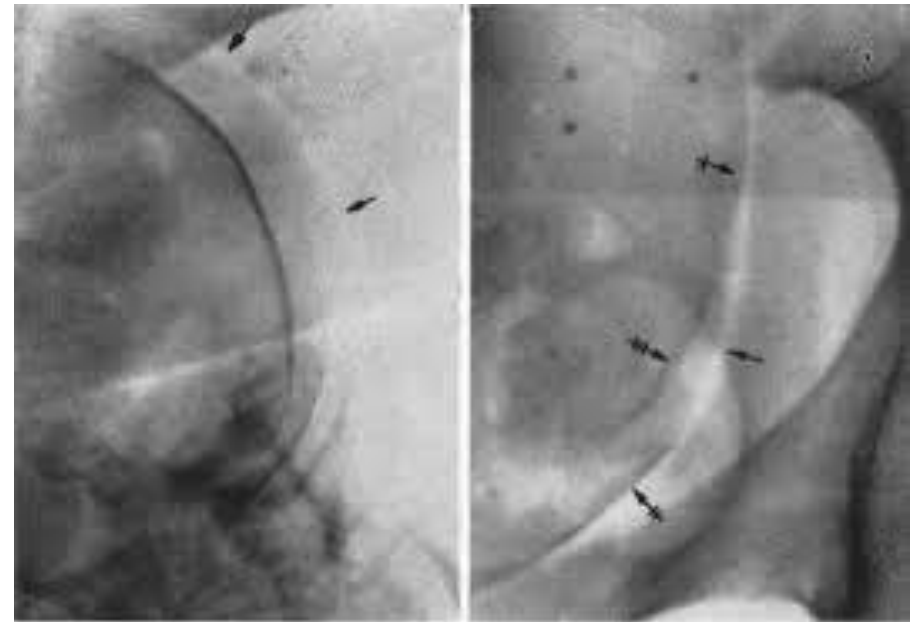
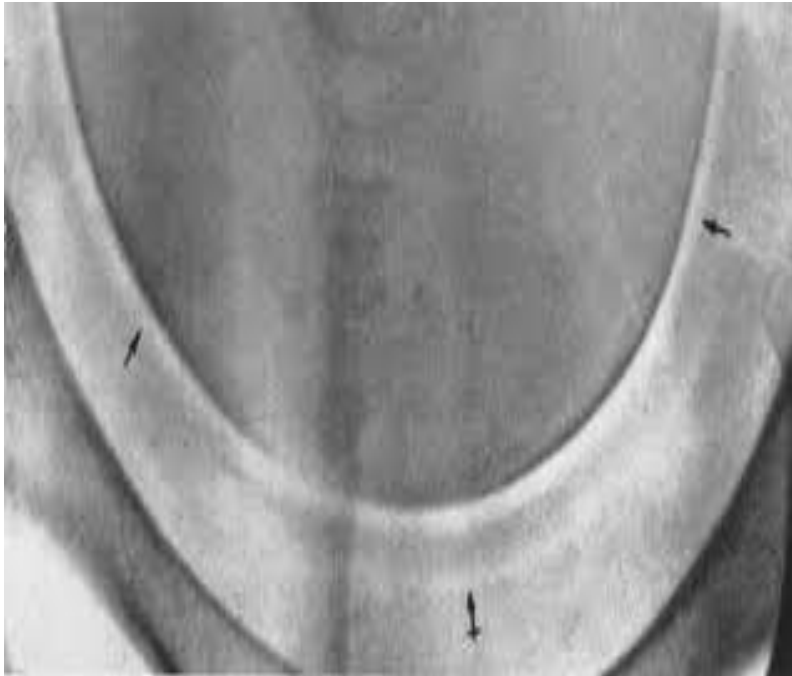


4. **Spalding sign** : seen because of liquefaction of brain .
Leads to overlapping of cranial bones.



5. Hyperflexion of spine + crowding of ribs.

6. **Deuel's halo sign** : skull tables shows Deuel's halo because of increase subcutaneous fat .



Findings in Live born :

- Respiratory signs present .
- Lungs : voluminous , inflated , soft, weight increase , rounded margins and light red in colour .
- Position of diaphragm: becomes lower 6-7 ribs . (before respiration 4-5 ribs).

Tests for live born :

Tests which suggests the air entry :

1. **Wreden test** : air present in ear .
2. **Breslau second life test** : air in stomach / intestine.
3. **Fodere test** : lung weight- doubled after respiration.

Before respiration –30gms , after respiration – 60 gms.

4. **Ploucquet's test** : proportion of lung weight/ body weight .

Lung weight / body weight = $1/70$: before respiration, $1/35$ after respiration.

5. **Hydrostatic test** : Breslau 1st life test / Raygat test :



- Do not sink in water or floats in water .
- Specific gravity - 0.94
- Respiration +++

- Sinks in water
- Specific gravity –1
- Respiration ----

- **False positive :** non respired lung showing positive test .

1. decomposition – gas in lungs (liver taken as control)
2. artificial respiration

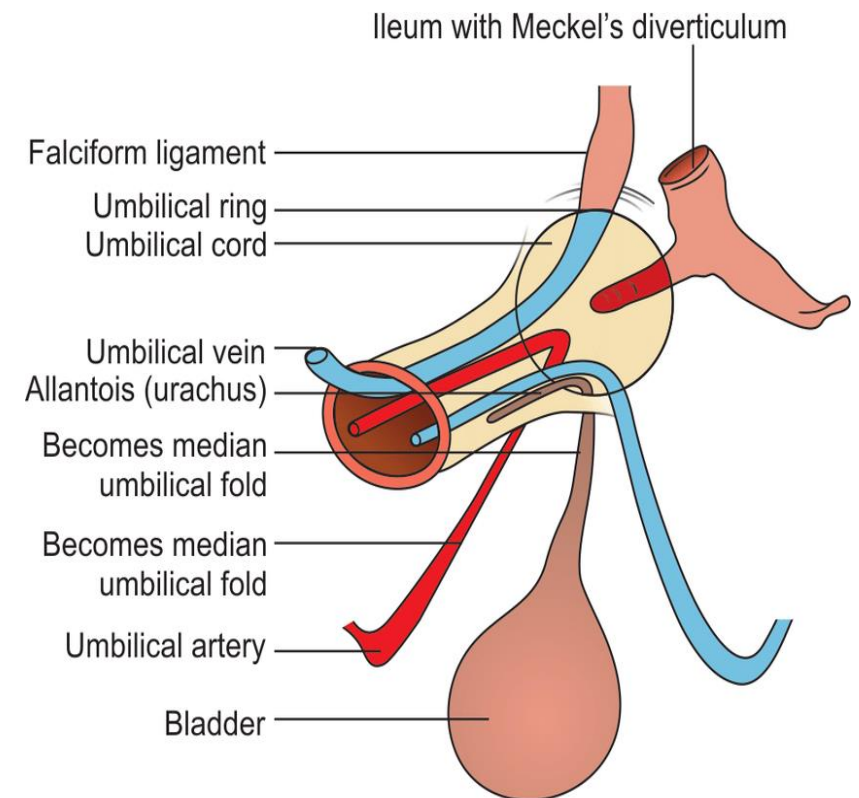
- **False negative :** fetus respiration occurred but test is negative .

1. pulmonary edema.
2. alveolar duct membrane
3. feeble respiratory effort
4. pneumonia
5. Air absorbed by lung.

Umbilical structures :

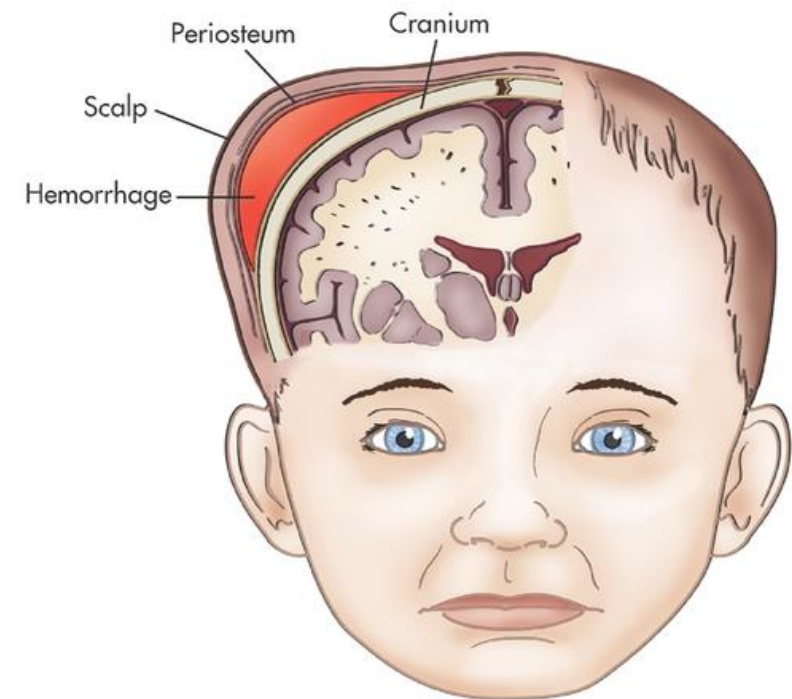
Umbilical

- **Artery** – closes by 3rd day – forms **medial umbilical fold** .
- **Vein** - closes by 4th day - **ligamentum teres**
- **Cord** – closes by 5-6 days – **falls off** .
- **Ductus venosus** – **closes by 3-5 days**.
- Ductus arteriosus – closes by 7-10 days.
- Foramen ovale –closes by 2-3months.
- Crying of baby intra uterine - vagitus uterinus.
- Crying of baby in vaginal canal – vagitus vaginalis.



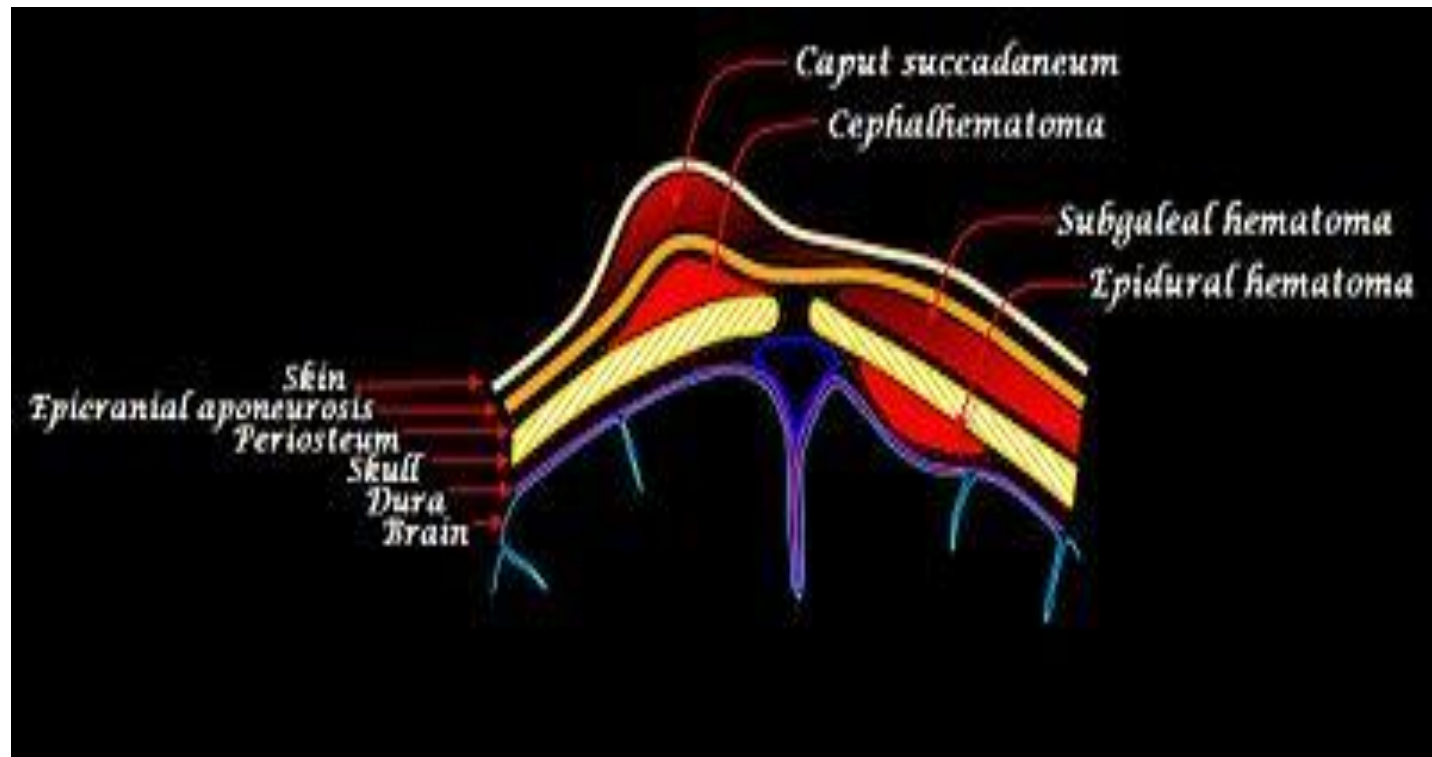
Cephalohematoma:

- Injuries due to instrument .
- Present in between periosteum and skull , Most commonly in right parietal bones .
- Cephalohematoma never crosses suture lines .



Caput succedaneum:

- Edema & congestion of scalp because of pressure produced by vaginal ring.



Sudden infant death syndrome (SIDS)

- Also known as **crib death or cot death**.
- No cause can be ascertained after death - negative autopsy .
- Most common cause of SIDS – **sleep apnea**.
- **IPC 312-316**: criminal abortion .
- **IPC 317** : abandoning the child <12 years .
- **IPC 318** : concealment of birth -> Punishment : 2 years + fine .

Step 1

Life-threatening event

Asphyxia and brain hypoperfusion



Step 2

Failure of arousal

Progressive asphyxia



Step 3

Hypoxic coma

Step 4

Bradycardia and gasping

Step 5

Failure of autoresuscitation resulting in death

Safe Sleep Do's and Don'ts

Do's ✓

- ASTM Certified Crib
- Baby on Back
- Firm Crib Mattress
- Fitted Pad & Sheets
- Mattress Encasement
- Swaddle Newborns



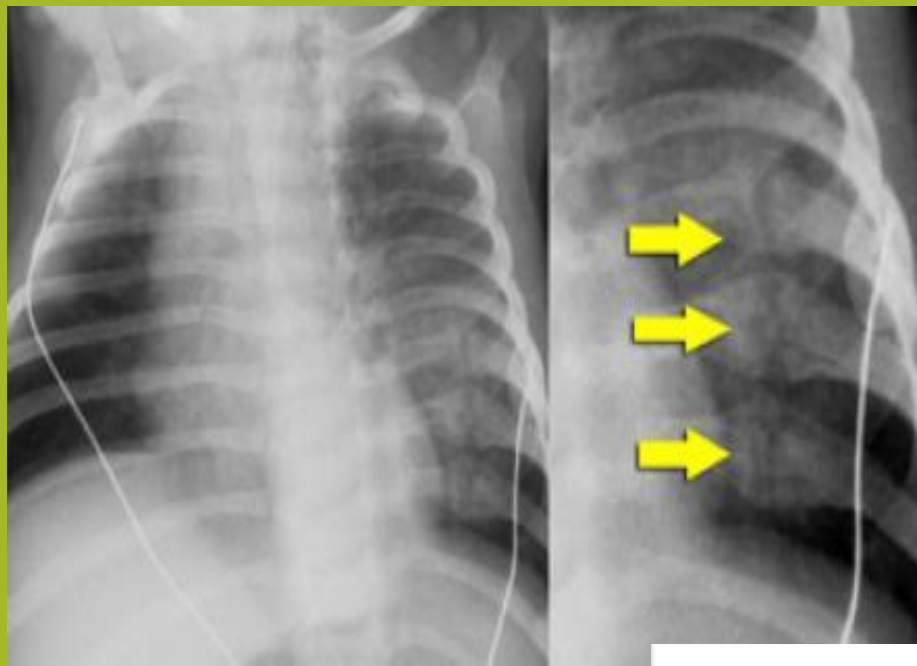
Don'ts ✗

- Crib Bumpers
- Blankets
- Pillows
- Stuffed Animals or Toys
- Cords Near the Crib
- Sleep Positioners or Wedges



Battered baby syndrome :

- Also known as **Caffey syndrome** .
- Baby is abused physically by guardian or parent repeatedly.
- History given by parents and physical findings on the baby's body are inconsistent.
- Multiple injuries of various duration is seen:
 - Multiple rib fractures : **string of beads appearance**.
 - Metaphyseal fractures of long bones - **Bucket handle fracture / corner fracture** .
 - Skull fracture – **eggshell fracture** .



Bucket Handle Fractures

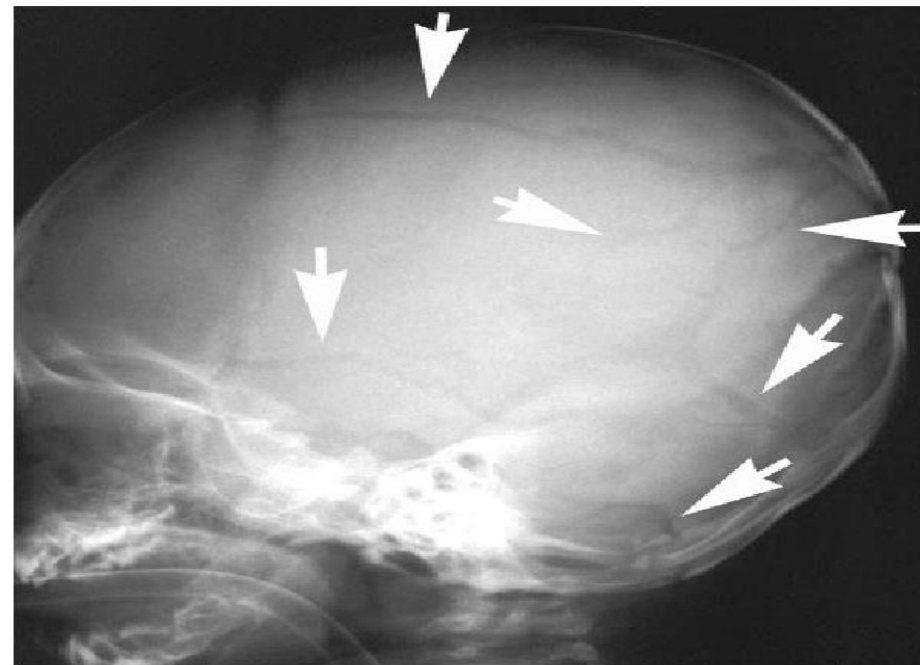
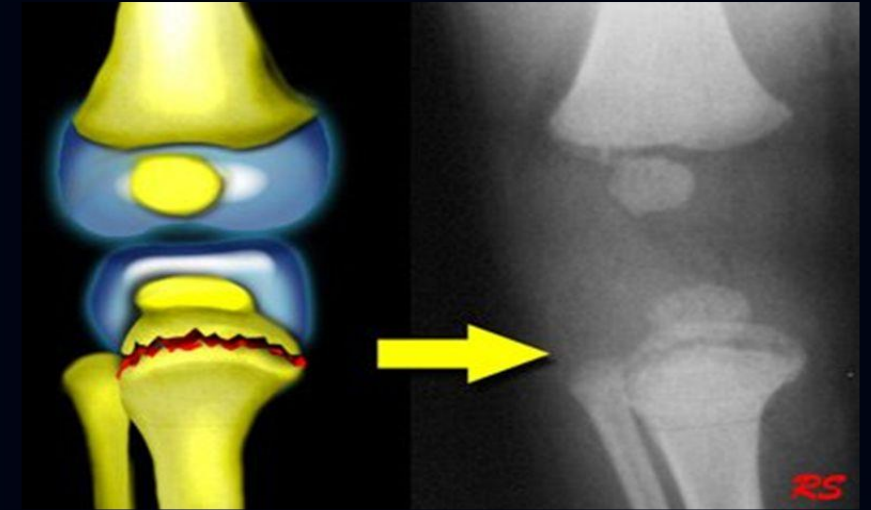


Figure 19. Complex skull fractures in an abused

Shaken baby syndrome:

Characterized by:

- Intraocular bleed : **dot –blot Hemorrhage**.
- Periorbital hematoma
- Subdural hemorrhage
- Also known as **Infantile Whiplash syndrome** : because of repeated shaking -> forced hyperextension of neck -> hyperextension injury of neck .
- Six penny bruise or **coin shaped bruise** may be present on body .
- **Butterfly bruises** may be present on body.



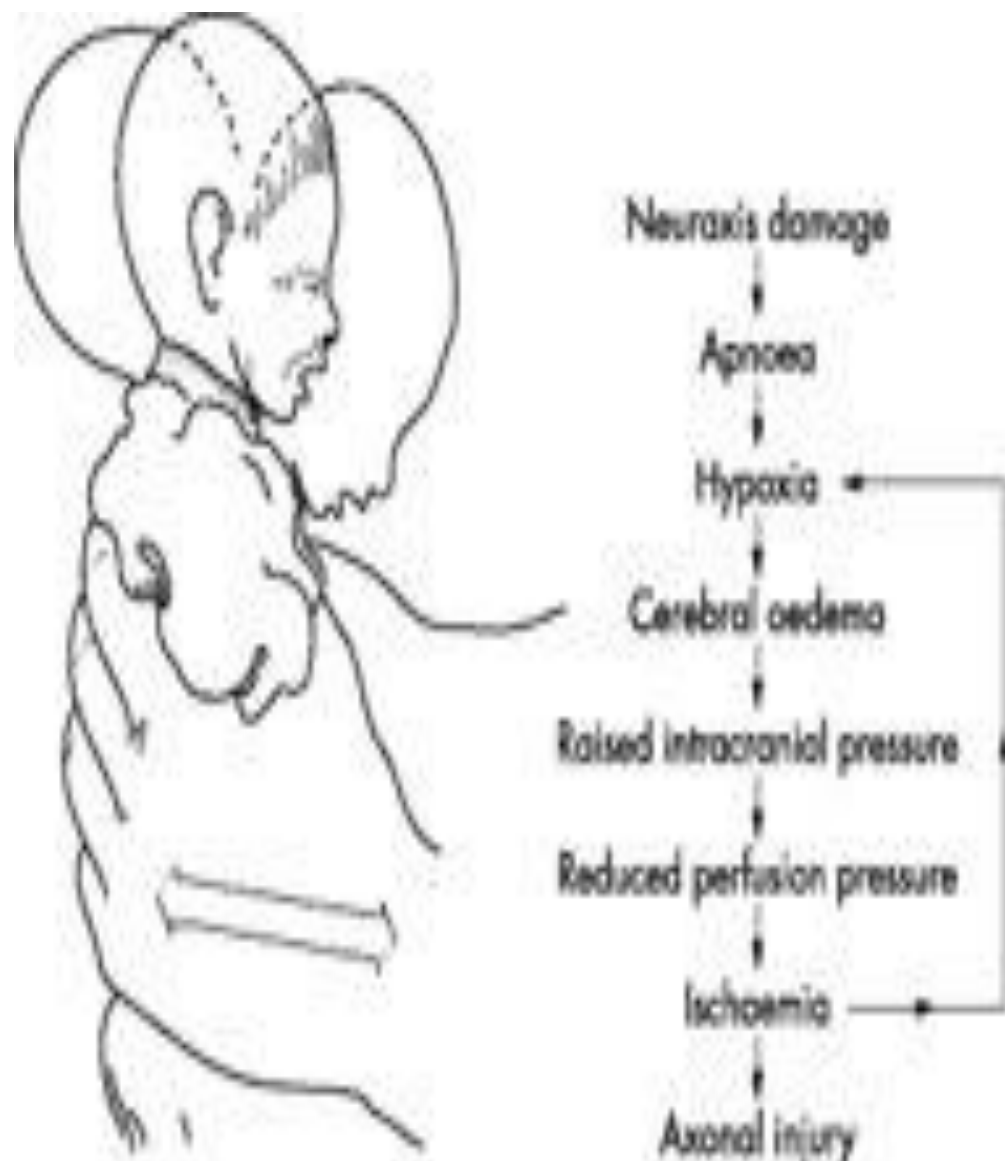
Shaken Baby Syndrome



Immediate Consequences:

Breathing may stop
Extreme irritability
Limp arms and legs
Decreased level of consciousness
Inability to suck or swallow
Heart may stop
DEATH

source: www.dontshake.com



Q1: Spalding's sign is seen in:

- a) Mummification
- b) Starvation
- c) Drowning
- d) Maceration

Q2: Robert sign is seen in:

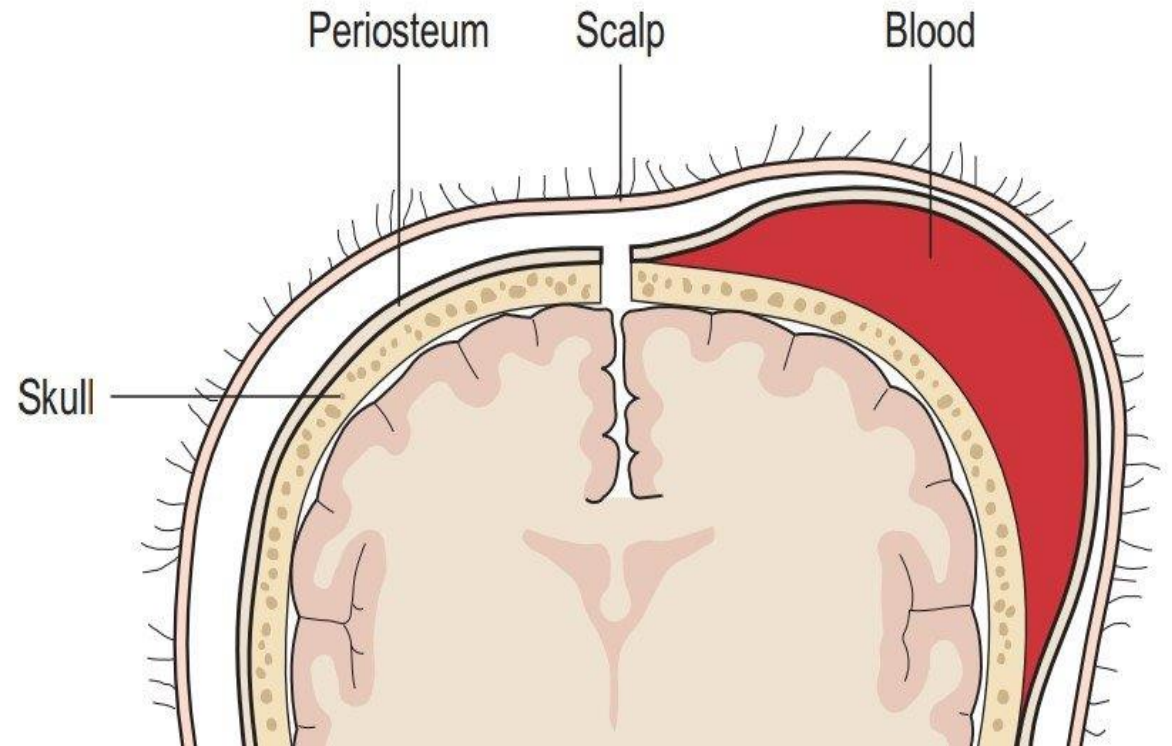
- a) Fetal distress
- b) Postmature fetus
- c) Premature fetus
- d) Fetal death

Q3: False positive hydrostatic test in fetus is seen in:

- a) Putrefied fetus
- b) Congenital syphilis
- c) Atelectasis
- d) Pneumonia

Q6: the image shows

- a) Cephalohematoma
- b) Caput succedaneum
- c) Epidural hemorrhage
- d) Subgaleal hemorrhage



Q7: Nobbing fracture is a feature of :

- a) Battered baby syndrome
- b) Munchausen syndrome
- c) Sudden infant death syndrome
- d) Sandifer' s syndrome

Q8: Which of the following is least likely in battered baby syndrome?

- a) Subdural hematoma
- b) Periosteal shearing
- c) Multiple injuries at same stage of healing
- d) Bruises on trunk & extremities.

Q9: Punishment for infanticide comes under :

- a) IPC 102
- b) IPC 302
- c) IPC 304
- d) IPC 306

THANKYOU