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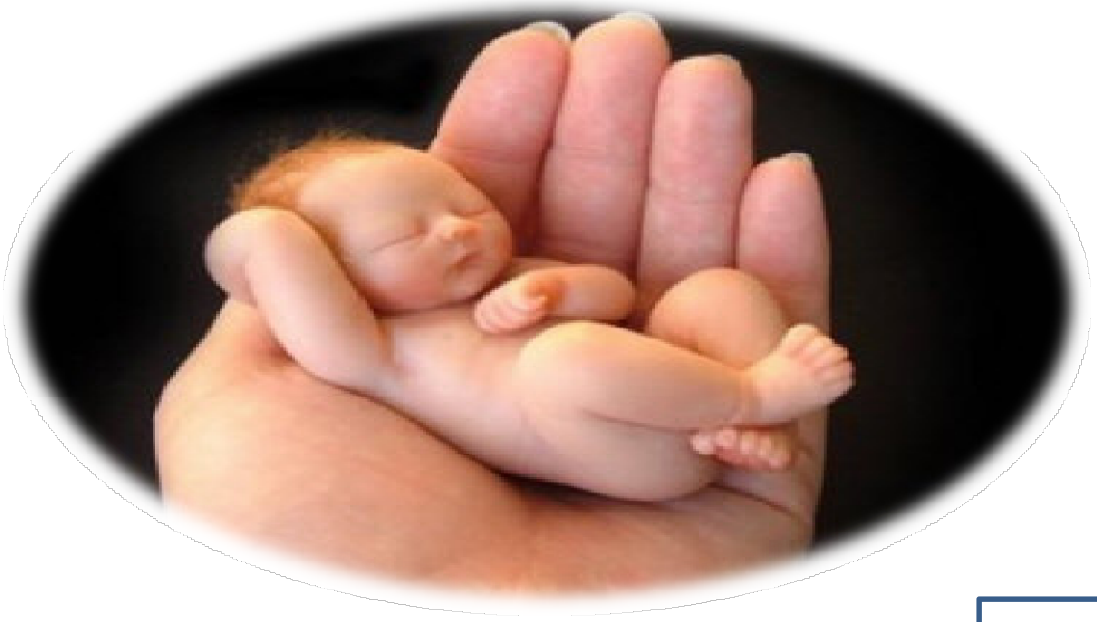
FACULTY OF NURSING

CARE OF A NORMAL NEWBORN



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S.No	TERMINOLOGY	MEANINGS
1	Neonate	From birth to 4 weeks (28days)
2	Early neonatal period	From birth to 7 days of life (168 hours)
3	Late neonatal period	From 7^{th} day to 28^{th} days of life
4	Term baby	Neonate born b/w 37-42 weeks of gestation.
5	Pre-term baby	Neonate born before 37 weeks of gestation.
6	Post-term baby	Neonate born after 42 weeks of gestation.
7	Perinatal period	The period extending from 22^{nd} week of gestation to 7 days after birth
8	Live birth	Complete expulsion or extraction from mother of product of conception, which after separation shows signs of life at least 1 hour,

CLASSIFICATION ACCORING TO SIZE:-

1. **Low birth weight (LBW) infant-** weight is less than 2500 g.
2. **Moderately LBW-** weight is 1500-2500 g.
3. **Very LBW-** weight is less than 1500 g.
4. **Extremely LBW-** weight is less than 1000 g.

CLASSIFICATION ACCORDING TO GESTATIONAL AGE

1. **Premature (preterm)-** an infant born before completion of 37 of gestation, regardless of birth weight.
2. **Full-term infant-** an infant born between the beginning of 38 weeks and completion of 42 weeks of gestation, regardless of birth weight.
3. **Post mature (post term) infant-** an infant born after 42 weeks of gestational age, regardless of birth weight.

CLASSIFICATION ACCORDING TO MORTALITY-

1. **Fetal death-** Death of the fetus after 20 weeks of gestation and before delivery, with absence of any sign of life after birth.
2. **Neonate death-** death occurs in the first 27 days of life is known as neonate death. Early neonatal death occurs in the first week and late neonate occur between 7-27 days.
3. **Perinatal mortality-** describe the total number of fetal and early neonate deaths per 1000 live births.
4. **Postnatal death-** death of neonate that occurs between 28 days to 1 year.

CARE OF NEWBORN

Care of the new born at birth is primarily aimed at helping the new born to adapt physiologically to extra uterine environment. This physiological adaptation includes-

a. Initiation of respiratory and oxygenation of arterial blood.
b. Temperature regulation.
c. Initiation of feeding.

NEWBORN ASSESSMENT

1) Immediate newborn assessment.
2) Transitional assessment- during period of reactivity.
3) Periodic assessment.

1. IMMEDIATE NEWBORN ASSESSMENT-

- ❖ APGAR scoring checked.
- ❖ Recording the birth weight.
- ❖ Umbilical cord is examined for presence of 2 umbilical arteries and 1 vein.
- ❖ Orifice counting and checking their patency.
- Mouth is checked for cleft lip & palate.
- Check ear and nose.
- Check urethra for Hypospadiasis or Epispadiasis.

APGAR TEST

The Apgar score rates:

Respiration, crying

Reflexes, irritability

Pulse, heart rate

Skin color of body and extremities

Muscle tone

A.D.A.M.

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APGAR SCORING CHART			
Category	**0**	**1**	**2**
Heart rate	Absent	Slow (less than 100 beats/min)	More than 100 beats/min
Respiratory effort	Absent	Slow, irregular	Good, crying
Muscle tone	Flaccid	Some flexion of extremities	Active motion
Reflex irritability	No response	Weak cry or grimace	Vigorous cry
Color	Blue, pale	Body pink, extremities blue	Completely pink

2. TRANSITIONAL ASSESSMENT-

The period of 1st to 24 hours of life is the period of reactivity.

a. 1st period of reactivity- 6 to 8 hours-

- General examination
- Anthropometric examination
- Head to toe examination
- Neurological examination
- Reflexes
- Estimation of gestational age

b. 2nd period of reactivity-It starts when the newborn awakes from first sleep, that is about 6-8 hours after birth. This period lasts for about 2-5 hours.

i. General examination-

- **Posture**
- **Activities**
- **Cry – when the baby is hunger and wet.**
  Weak cry- if the baby is preterm.
  High pitch cry- raised intracranial pressure.
- **Colour- inter body & extremities are pink.**
- **Vital signs-**
  - ***Normal temperature (Newborn)- 35-37*C**
  - *** Heart rate- 120-150 b/m.**
  - *** Respiration- 40-60 br/m**

ii. Anthropometric examination-

S.No	Anthropometric	Measurement
1	Weight	2.5-4 kg
2	Length	45-50 cm
3	Head circumference	33-35 cm
4	Chest circumference	31-33 cm

iii. Neurological examination-

❖ Muscle tone of the body-

- Posture

- Passive tone

- Active tone

❖ Joint mobility-

- In term baby more relaxed & flex.

- In pre- term baby joints are relatively stiff so the degree of flexion at ankle & wrist limited.

❖ **Certain reflexes**-

- Moro’s reflex
- Pupillary reflex
- Blinking reflex
- Grasp reflex
- Rooting & sucking reflex

❖ **Body Movements-**

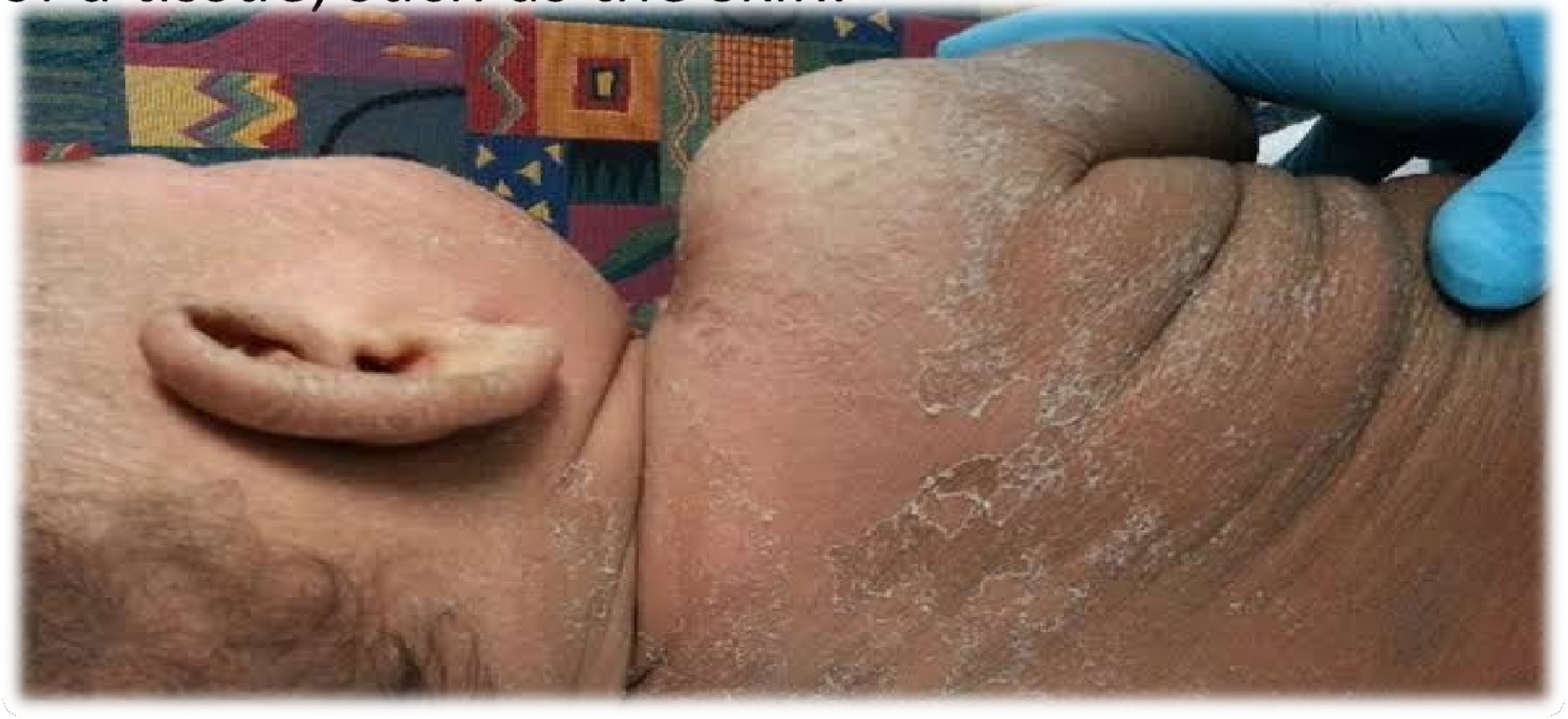
- If the neonate is not sleep the body is active & alert.
- The baby moves extremities actively.

iv. Head to toe examination-

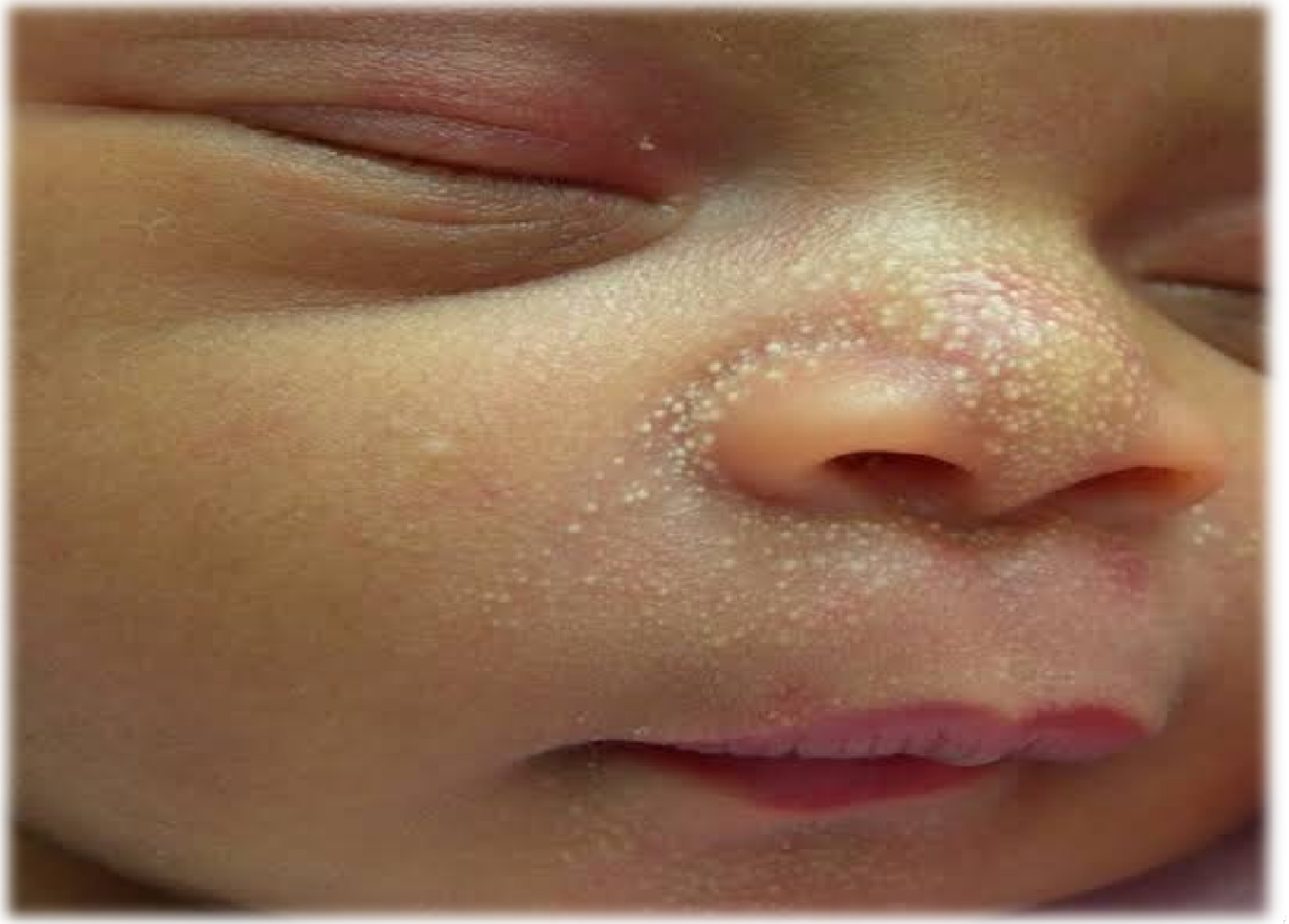
a. Lanugo- found after 20 weeks of gestation on the entire body except the palms & soles.

b. Vernix caseosa- also known as ***vernix***, it is the waxy or cheese-like white substance found coating the skin of newborn human babies.

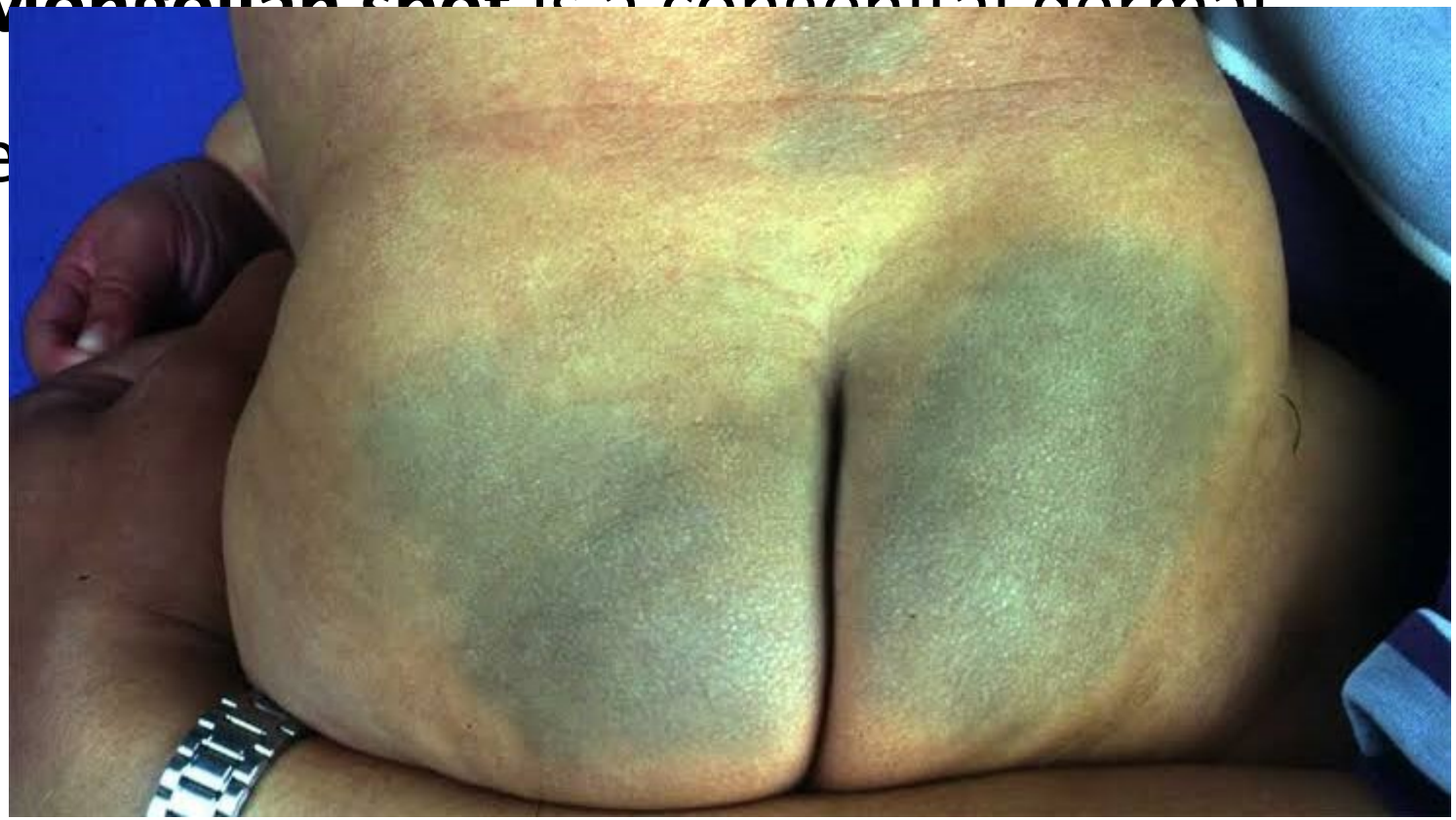
c. Desquamation- it commonly called skin peeling, is the shedding of the outermost membrane or layer of a tissue, such as the skin.



d. Milia- It are tiny white bumps that appear across a baby's nose, chin or cheeks.

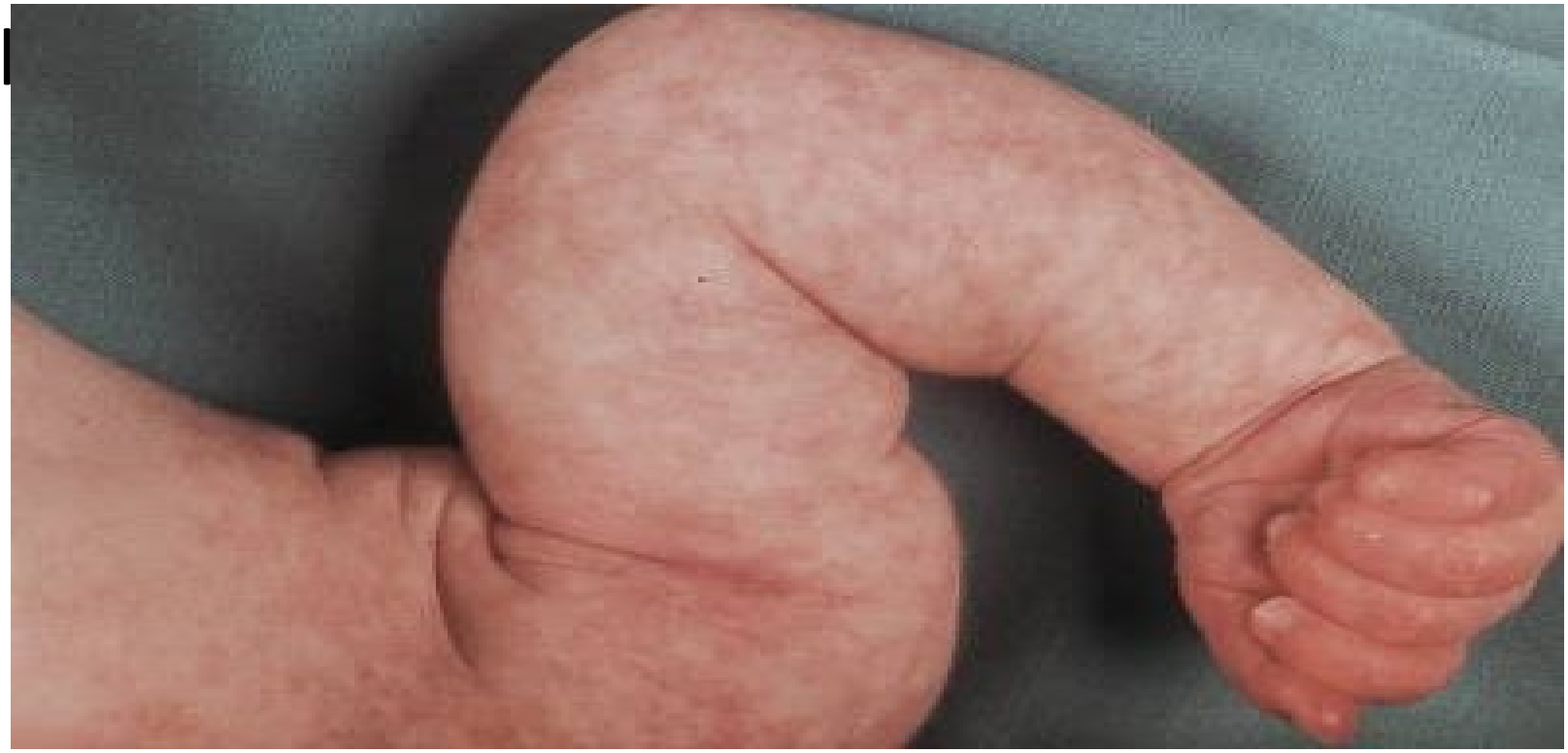


e. Mongolian spots- it is a type of birthmark caused by the blue-green or pigmentation in the skin. The medical term for a pigmented birthmark such as a **Mongolian spot** is a congenital dermal me

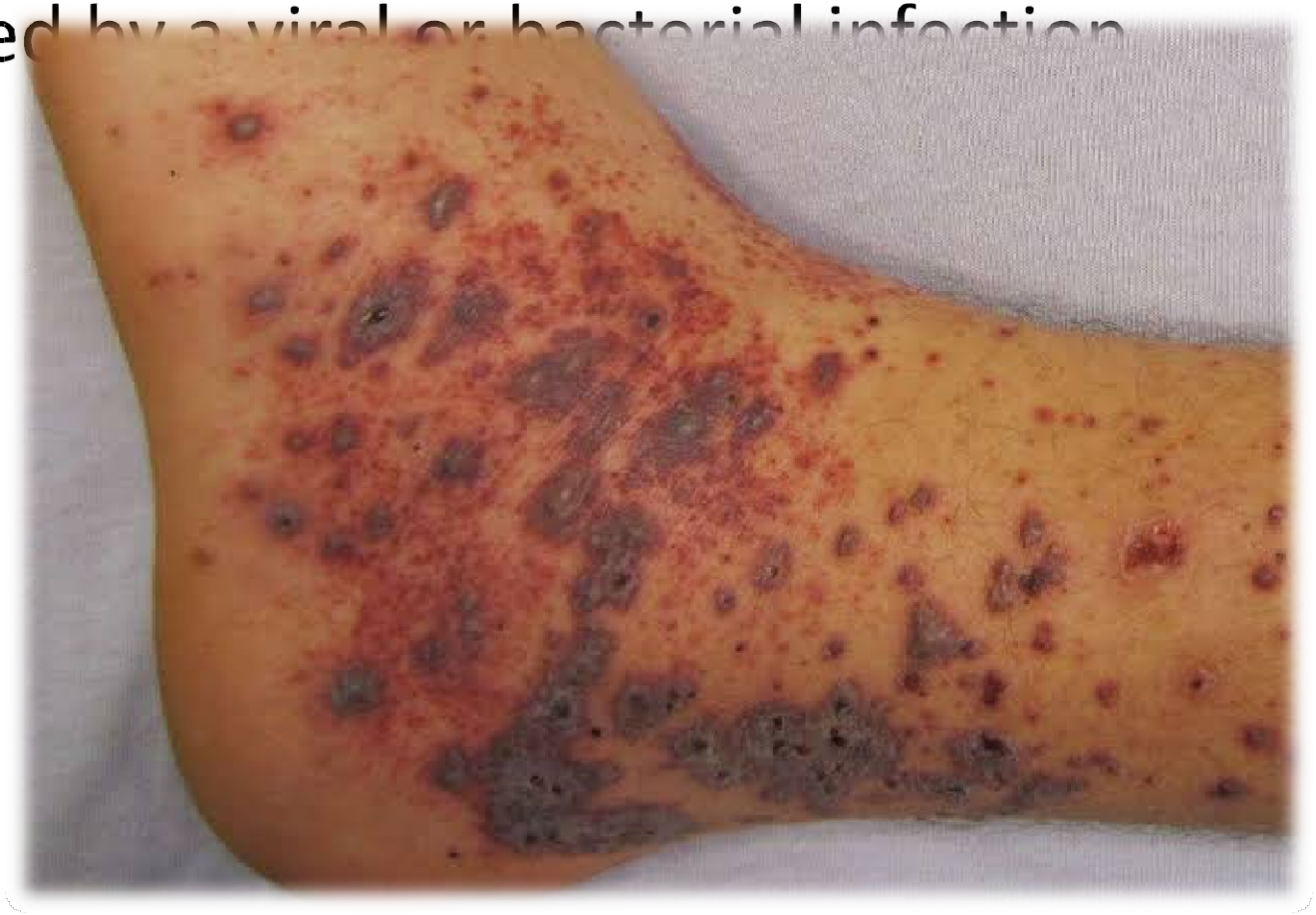


f. Salmon patches- It often called stork bites or angel kisses, are common birthmarks seen in almost one-third of infants.

g. Mottling- It occurs when the baby's skin looks blue or pale and blotchy. There may also be a bluish marbled or weblike pattern on the baby's skin. Mottling is not uncommon in premature or ill

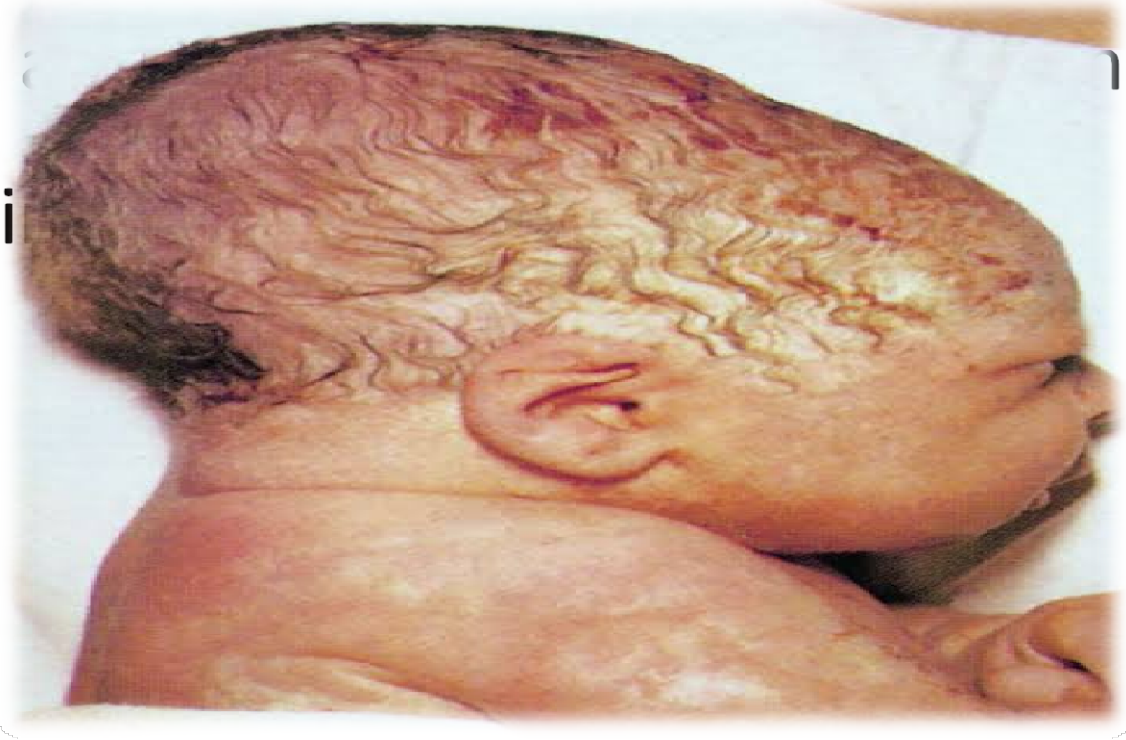


h. **Petechiae:-** it is tiny (2 mm) red spots on the skin. Petechiae usually occur on the arms, legs, stomach, and buttocks. They don't itch. The spots may be caused by a viral or bacterial infection.

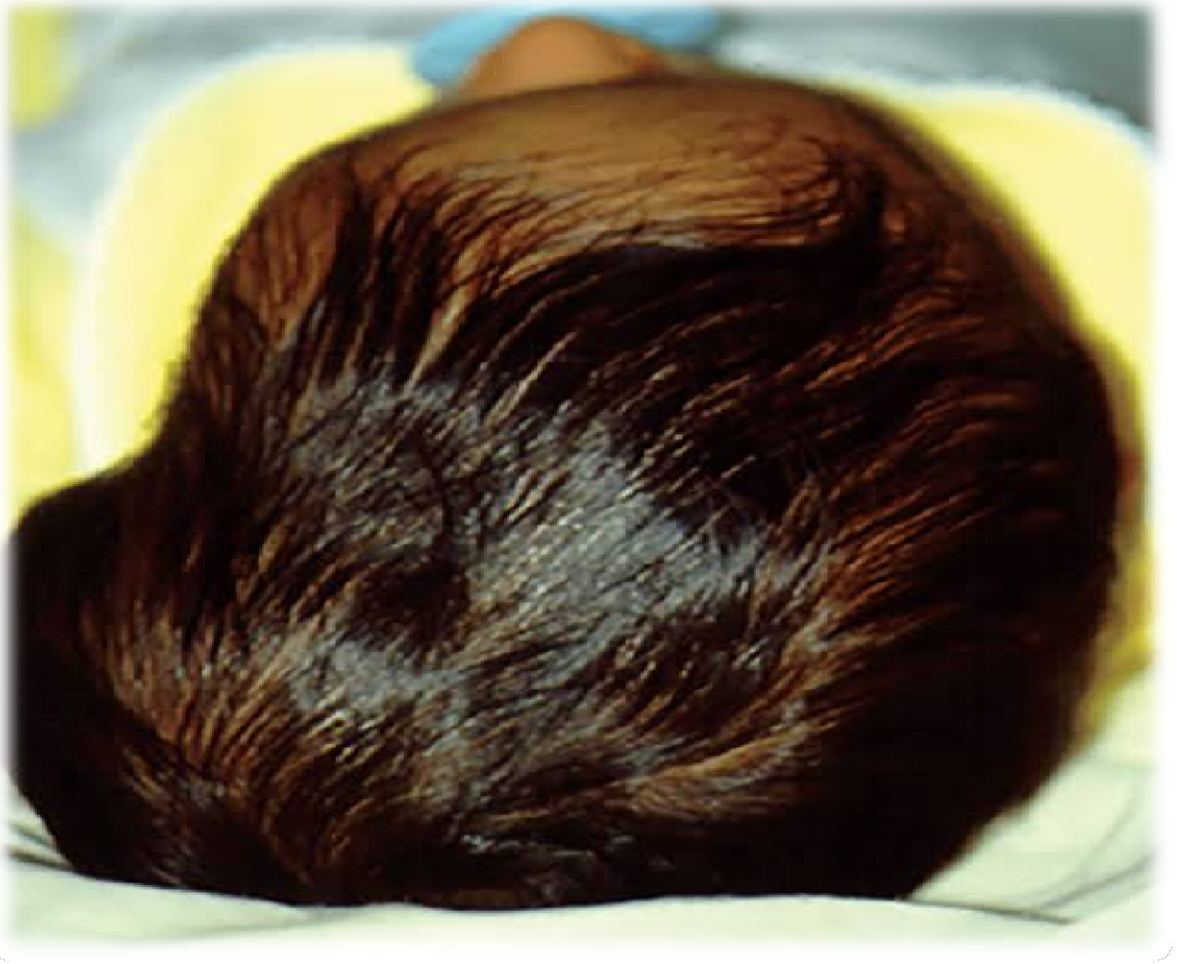


HEAD

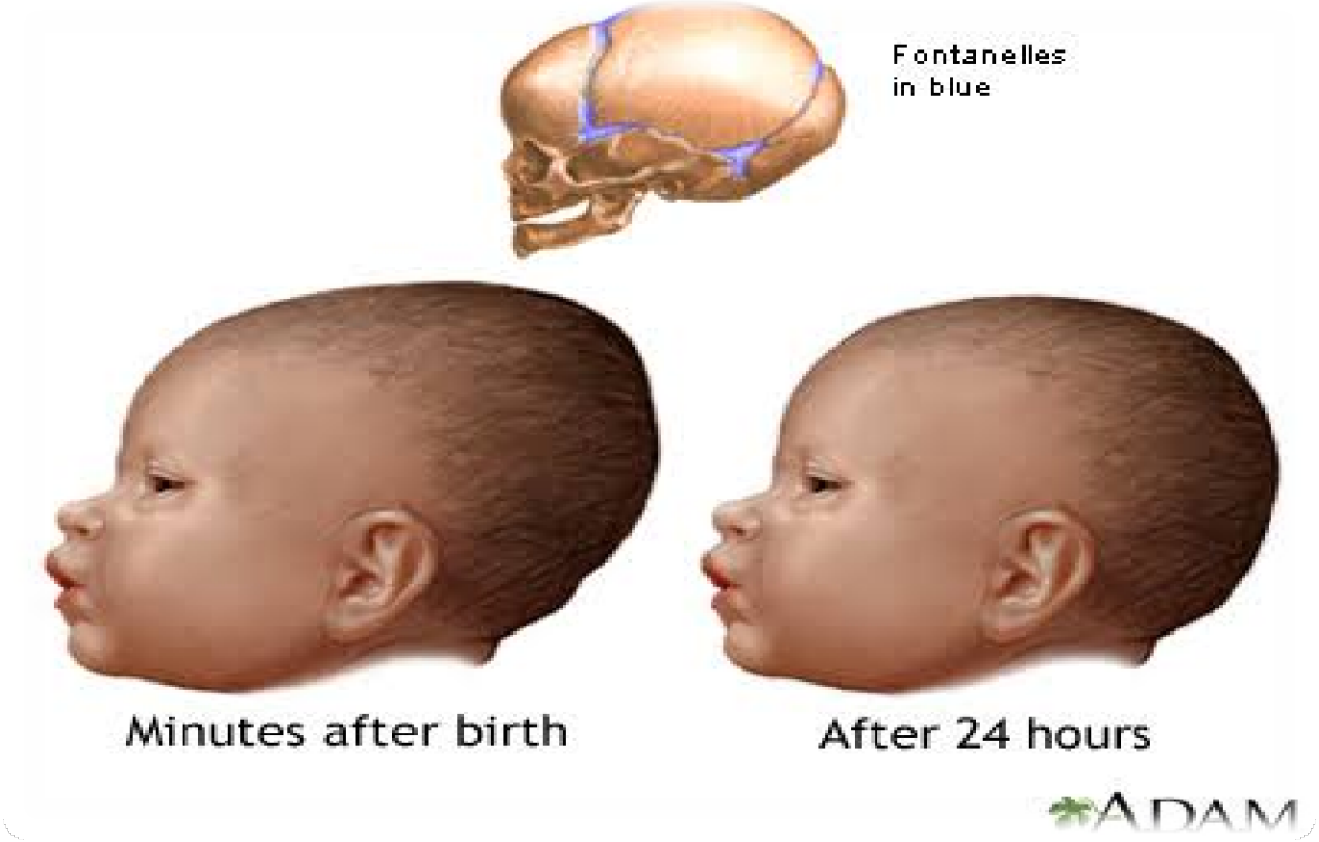
i. Caput succedaneum- it refers to swelling, or edema, of an infant's scalp that appears as a lump or bump on their head shortly after delivery. This condition is harmless a e infant's head duri



ii. Cephalohaematoma- It is a traumatic subperiosteal haematoma that occurs underneath the skin, in the periosteum of the infant's skull bone.



iii. Molding- It is an abnormal head shape that results from pressure on the baby's head during childbirth. It is disappear in few days.



iv. Forceps marks:- U-shaped bruising usually on the cheeks after forceps delivery.

Face-

- Facial moment & symmetry, size, shape & spacing of eyes, nose & ears.

Color-

- White sclera
- Gray, brown or dark blue.
- Final eye color after 6-12 months.

Nose-

- Small & narrow.
- Flattered or midline.
- Nasal breaths.
- Positive low nasal bridge – down’s syndrome.

Ear-

- Discharge
- Pinna is equally divided
- Ears is symmetrical

Mouth-

- Pink, moist gums
- Soft & hard palate
- Tongue moves freely
- Positive extrusion & gag reflexes
- Small mouth or large tongue- chromosomal abnormality

Neck-

- Short, thick in midline
- Able to flex and extend
- Stiffness & rigidity
- Any cyst & mass
- Excessive skin folds & webbing
- Thyroid gland not palpable

Chest-

- Cylindrical & symmetry
- Abdominal breaths
- Positive bronchial sounds
- Positive breast enlargement, subsides after 2 weeks.

Abdomen-

- Palpate the abdomen for check any mass.
- Check the spleen tip is situated is left side.
- Check the umbilical for 2 artery and 1 vein.
- Check abdominal distention.

Feet and hands-

- Observe the digits for assessing the down’s syndrome.
- Look for the creases in the feet.
- Examine the range of motion.

Genitalia-

In full term female neonate-

- Check labia minora and majora is covered.
- Check clitoris is visible.
- Urethral opening is situated behind clitoris.

In full term male neonate-

- Check the location of urethral opening.
- Check scrotum is large, pendulous and testes are descended.

Back and spine-

- Inspect the spine for any mass, opening.
- Check any protruding sac.

REFLEXES

Reflex	Expect behavioral response	Age of appearance	Age of disappearance
	A. Eyes		
1. Blinking	Infant blinks at sudden appearance of bright light or approach of any object towards eye	birth	Doest not disappear
2. Pupillary reaction	Pupil constricts when bright light falls on it.	birth	Doest not disappear
3. Doll's eye	As head is moved to right or left, eye lag behind and do not immediately adjust to new position.	birth	3-4 month
	B. Nose		
4. Sneeze	Spontaneous response of nasal passage to any irritant.	birth	Doest not disappear
5. Glabeller	Tapping briskly on bridge of nose	birth	Doest not disappear

	C. Mouth		
6. Rooting	The infant turns his head towards any object that touches his cheeks and actively seeks the nipple ad begins to suck.	birth	3-4 month
7. Sucking	baby begins to suck in response to stimulation of circumoral area	birth	Persistent during infancy
8. Gag	Stimulation of posterior pharynx by food or suction causes infant to gag.	birth	Persistent throughout life
9. Extrusion	When tongue is touched or depressed, infant responds by forcing it outward.	birth	4 months
10. Cough	Irritation of mucous membrane of larynx causes cough.	birth	Persistent life long

	D. Extremities		
11. Grasp	Touching palms of hands or soles of feet near base of digits causes flexion of hands (palmar grasp) and sole (plantar grasp)	birth	Palmar-3 month Planter-8month
12. Babinski	Stroking outer sole of foot upward from heel across ball of foot causes toes to hyper extend.	birth	1 year
	E. Mass reflexes		
13. Moro's	When loud voice is made or there is sudden change in equilibrium, it causes sudden extension and abduction of extremities and fanning of fingers.	birth	3-4 months
14. Tonic neck	When infant's head is turned to one side, arm and leg extend on that side and opposite arm and leg flex.	2nd month	3-4 months

15. Dance or stepping	If infant is held such sole of foot touches a hard surface, there is reciprocal flexion and extension of legs.	At birth	3-4 weeks
16. Crawl	when placed on abdomen, infant makes crawling movements.	Birth	5 weeks
17. Galant reflex	Stroking infant back alongside spine causes hip to move towards stimulation side	At birth	4 weeks
18. Perez	When infant is prone on a firm surface, thumb is pressed along spine from sacrum to neck, infant responds by crying, flexing extremities and elevating pelvis and head and Lordosis of spine.	Birth	4-6 months

1. Blinking

2. Pupillary reaction

3. Doll’s eye

4. Sneeze

5. Glabeller

6. Rooting

7. Sucking

8. Gag

9. Extrusion

10. Cough

11. Grasp

12. Babinski

13. Moro's

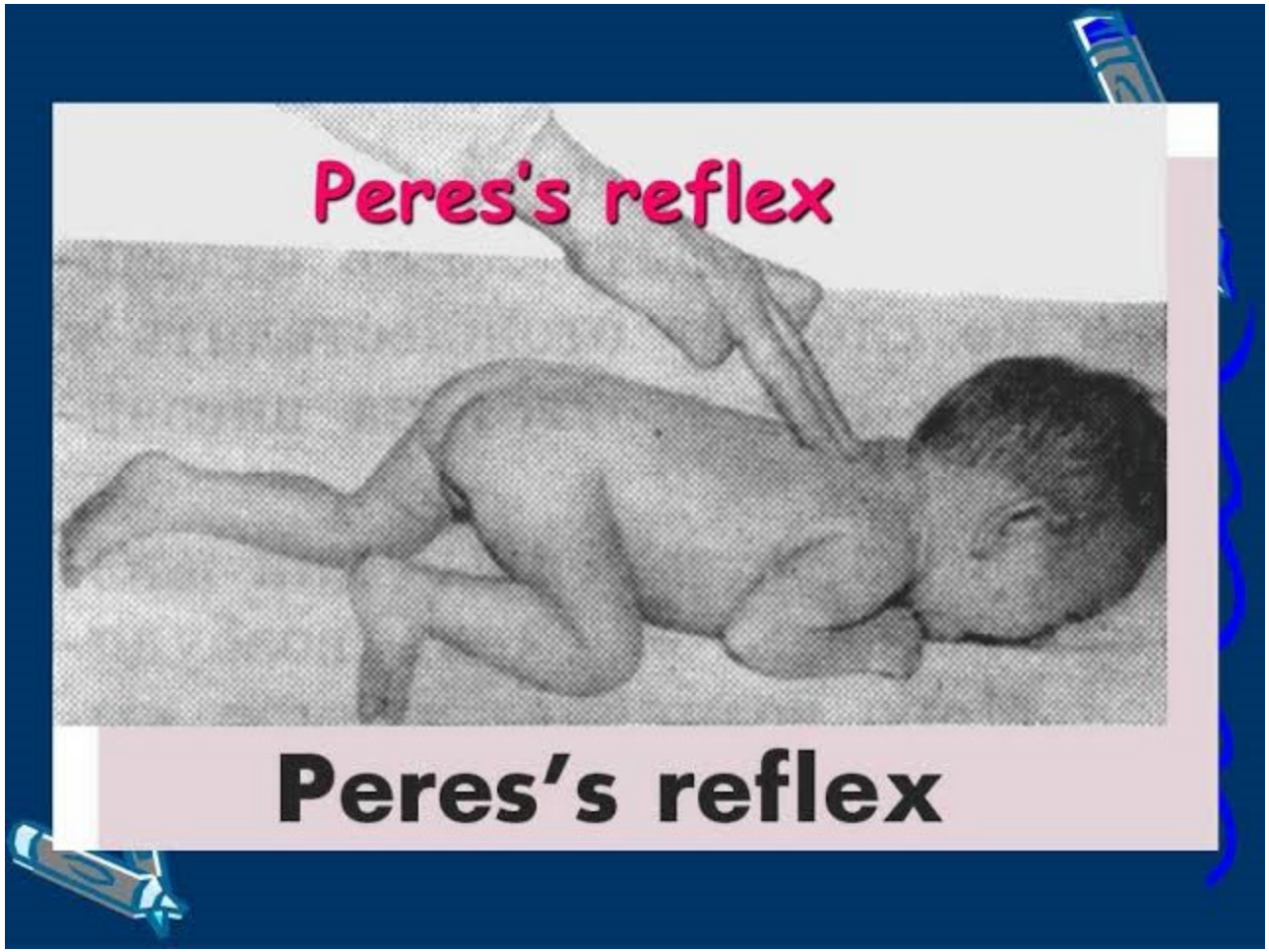
14. Tonic neck

15. Dance or stepping

16. Crawl

17. Galant reflex

18. Perez



- **ESTIMATION OF GESTATIONAL AGE-**

Assessment of gestational age of baby can be done using " New Ballards Scale". The scale can be used with neonates born between 20-44 weeks of gestation;

Scoring system for assessment of gestational age—

1. Physical
2. Neurological
3. **Physical-**

- Skin texture
- Lanugo
- Plantar creases
- Breast nodules
- Ear firmness
- Genitalia [male & female]

2. Neurological-

- Posture
- Arm recoil
- Popliteal angel
- Head lag
- Glabellar tap
- Scarf sign