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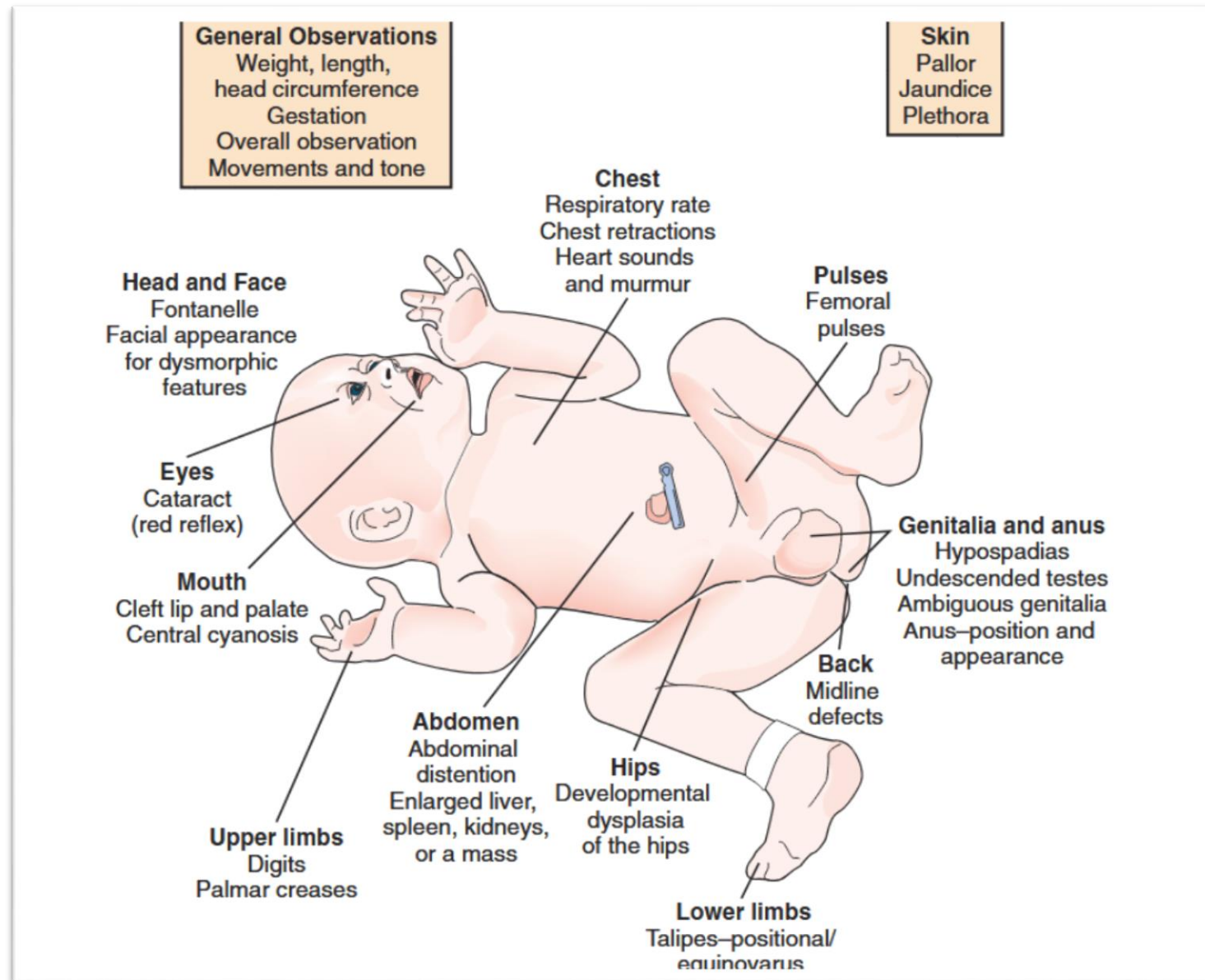
Initial examination

The initial examination of a newborn infant should be performed as **soon as possible after delivery**.

Temperature, pulse, respiratory rate, color, signs of respiratory distress, tone, activity, and level of consciousness of infants should be monitored frequently until stabilization.

After a stable delivery room course, a second and more detailed examination should be performed within **24 hr of birth**.

- For a healthy infant, the mother should be present during this examination; even minor, seemingly insignificant anatomic variations may worry the parents and should be explained.
- Palpation of the abdomen or auscultation of the heart should be performed first, before other, more intrusive manipulations are attempted.



General Appearance

- Major anomaly
- Color
- Respiration
- Birth injury
- sex

- Physical activity may be decreased by the effects of illness or drugs.
- Both active and passive muscle tone and any unusual posture should be noted.
- Tremulous movements with ankle or jaw myoclonus are more common than at any other age.

At 40 weeks

Male: 3.6 kg

Female: 3.5 kg

HC : 33-37cm

H : 48-53 cm



✓ **Generalized edema** may occur with prematurity, hypoproteinemia secondary to severe erythroblastosis fetalis, nonimmune hydrops, congenital nephrosis.




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- **Localized edema** suggests a congenital malformation of the lymphatic system; when confined to one or more extremities of a female infant the initial sign of **Turner syndrome**.



Skin

- Mottling may be associated with serious illness or related to a transient fluctuation in skin temperature (**acrocyanosis**).

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- An extraordinary division of the body from the forehead to the pubis into red and pale halves is known as **harlequin color change** , a transient and harmless condition.

Pallor may be caused by anemia, asphyxia, shock, or edema.

The **ruddy** appearance of plethora is seen with polycythemia.

Petechiae may be seen on the presenting part (usually the scalp or face) after a difficult delivery.

Mongolian spots

- Blue, well-demarcated areas of pigmentation called **mongolian spots** are seen over the buttocks, back, and sometimes other parts of the body and they tend to disappear within the 1st year.





- The vernix, skin, and especially the cord may be stained brownish yellow if the amniotic fluid has been colored by the passage of meconium during or before birth.
- Tufts of hair over the lumbosacral spine suggest an underlying abnormality, such as **occult spina bifida or a tumor.**



Erythema toxicum

- In many neonates, small, white papules on an erythematous base develop 1-3 days after birth.
- This benign rash persists for as long as 1wk, contains eosinophils, and is usually distributed on the face, trunk, and extremities .



Pustular melanosis

- Pustular melanosis , a benign lesion seen predominantly in black neonates, contains neutrophils and is present at birth as a vesiculopustular eruption around the neck, back, extremities, and palms or soles; it lasts 2-3 days.



Salmon patch

○

+



- **Amniotic bands** may disrupt the skin, extremities (amputation, ring constriction, syndactyly), face (clefts), or trunk (abdominal or thoracic wall defects).



Milia

- Milia are common condition of sebaceous gland hyperplasia (43% of infants), which manifests as small, flat, yellow dots seen on the midface.
- Because all these cysts resolve spontaneously within the first few weeks of life, **no treatment is required.**

Neonatal Acne and Infantile Acne

- Neonatal Acne and Infantile Acne Neonatal acne occurs in up to 20% of newborns and more commonly seen in boys (increased sebaceous secretions and colonization of them by the **Malassezia furfur**).
- They are characterized by small red papules and pustules on the face during the first weeks of life.



Ichthyoses

- The term ichthyosis derives from the similarity of the skin condition to the scales of a fish.



Epidermolysis Bullosa

- Epidermolysis bullosa (EB) refers to a group of diseases that are characterized by intraepidermal, junctional , or subepiderma subtypes with blisters produced by minor degrees of trauma and heat.



Hypopigmentation



Albinism

Phenylketonuria

Chédiak-Higashi
Syndrome

Tuberous Sclerosis

Hemangiomas

Cavernous hemangiomas are deeper, blue masses that, if large, may trap platelets and produce DIC or interfere with local organ function (1%-3% of newborns).



Generally, superficial hemangiomas have reached their maximal size by 6-8 months, but deep hemangiomas may proliferate for 12-14 months or, rarely, up to 2 years.





Skull

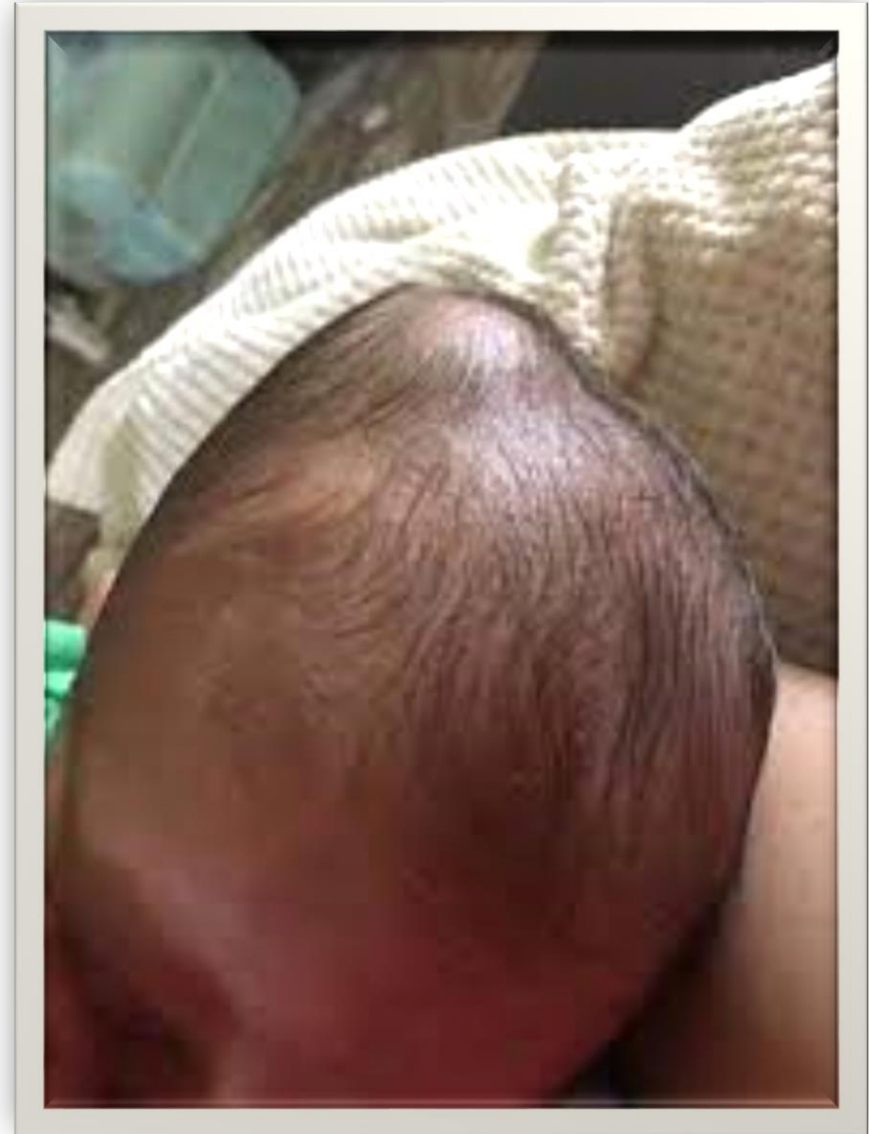
- The skull may be molded, particularly if the infant is the first-born and if the head has been engaged in the pelvic canal.

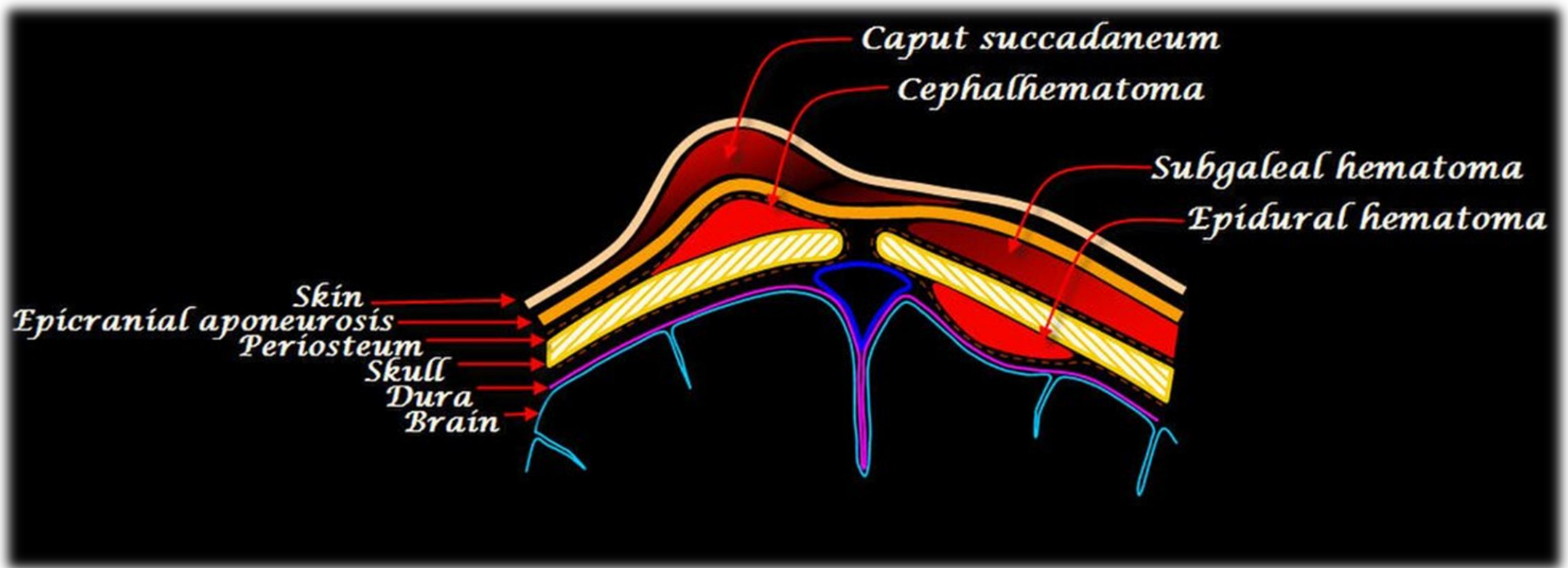


- ✓ ***Caput succedaneum*** ,appears as a circular boggy area of edema with indistinct borders and often with overlying ecchymosis.

✓ **A cephalohematoma** presents as a well-circumscribed fluid-filled mass that does **not cross suture lines**.

- Unlike caput succedaneum , cephalohematoma is often not present at delivery but develops over the 1st few hr of life.



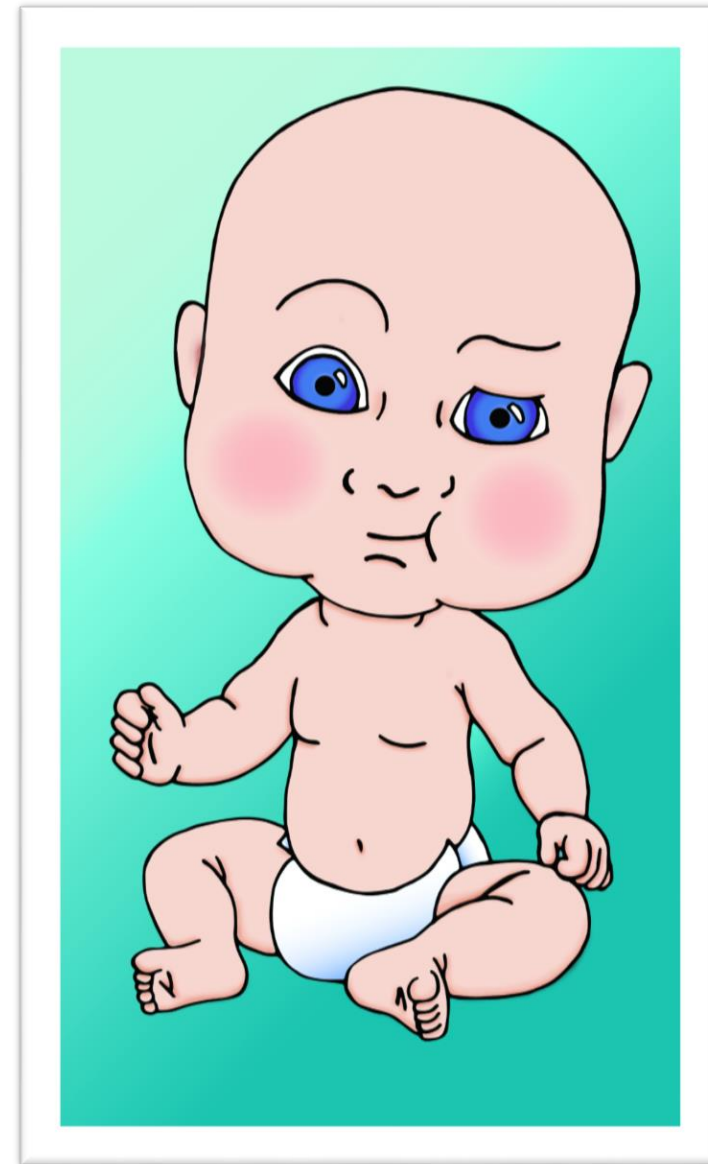


✓ **Subgaleal hemorrhage** requires prompt recognition because it may result in hypovolemic shock, with mortality up to 20%.

Head Circumference



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- The head circumference of all newborns should be plotted on a growth chart to identify an excessively small head (**microcephaly**) or excessively large head (**macrocephaly**).





Premature fusion of sutures
(cranial synostosis) is
identified as a hard non
movable ridge over the
suture.

The persistence of
excessively large anterior
(normal: 20 ± 10 mm) and
posterior fontanel has
been associated with
several disorders.

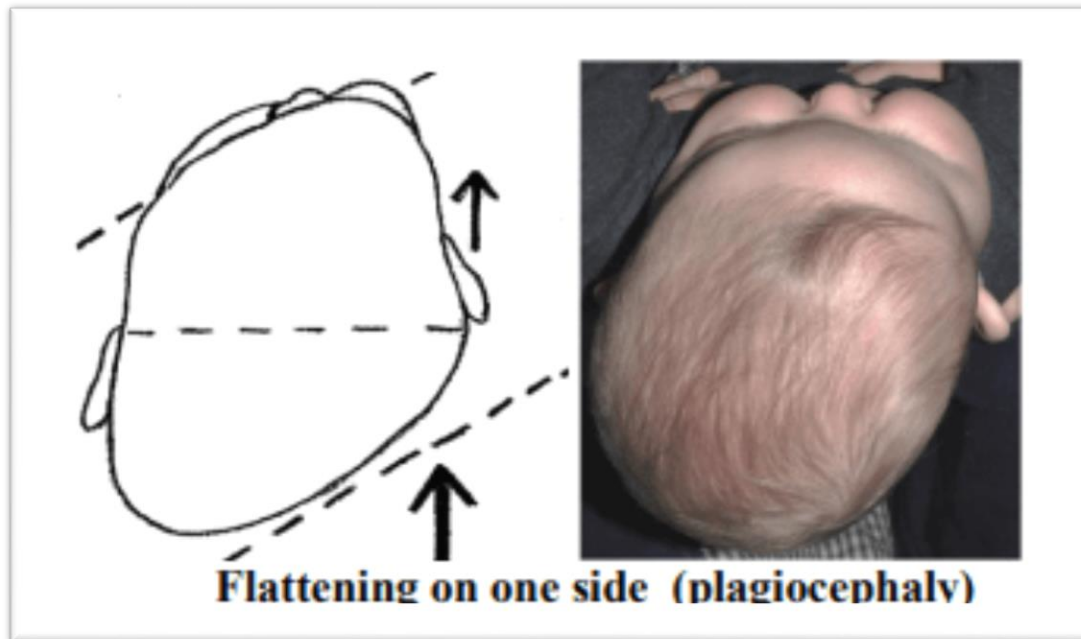
- Soft areas (**craniotabes**) are found in the parietal bones at the vertex near the sagittal suture.
- They are more common in preterm infants and in infants who have been exposed to uterine compression.





- Atrophic or alopecic scalp areas may represent *aplasia cutis congenita* , which may be sporadic, or autosomal dominant, or associated with trisomy 13, chromosome 4 deletion.

Deformational plagiocephaly



- Deformational plagiocephaly may be the result of in utero positioning forces on the skull and manifests as an asymmetric skull and face with ear malalignment .
- It is associated with **torticollis**.

Face

- The general appearance of the face should be noted with regard to dysmorphic features (syndromes) :
 - ✓ Widely or narrowly spaced eyes
 - ✓ Microphthalmos
 - ✓ Asymmetry
 - ✓ Long philtrum
 - ✓ Low-set ears

Conjunctival and retinal hemorrhages

- Usually are benign and more common with vacuum or forceps-assisted deliveries than spontaneous vaginal delivery and least common after cesarean section.
- They resolve in most infants by 2 wk (85%) and in all infants by 4 wk.





The face may be asymmetric as a result of a 7th nerve palsy, hypoplasia of the depressor muscle, or an abnormal fetal posture .



Symmetric facial palsy suggests absence or hypoplasia of the 7th nerve nucleus (**Möbius syndrome**).

Nose

The nares should be symmetric and patent.

Dislocation of the nasal cartilage from the vomerian groove results in asymmetric nares.

Anatomic obstruction of the nasal passages secondary to **unilateral or bilateral choanal atresia** results in respiratory distress.

Mouth

- A normal mouth may rarely have dentition, with natal (present at birth) or neonatal (after birth) teeth.
- **Extraction is not usually indicated.**
- The soft and hard palate should be inspected and palpated for a complete or submucosal cleft.



- On the hard palate on either side, there may be temporary accumulations of epithelial cells called **Epstein pearls** .
- **Retention cysts** of similar appearance may also be seen on the gums.
- Both disappear spontaneously, usually within a few weeks of birth.



- The tongue appears relatively large; the frenulum may be short, but its shortness (**tongue-tie or ankyloglossia**) is rarely a reason for cutting it.
- If there are problems with feedings (breast or bottle) and the frenulum is short, frenulectomy (frenotomy) may be indicated.

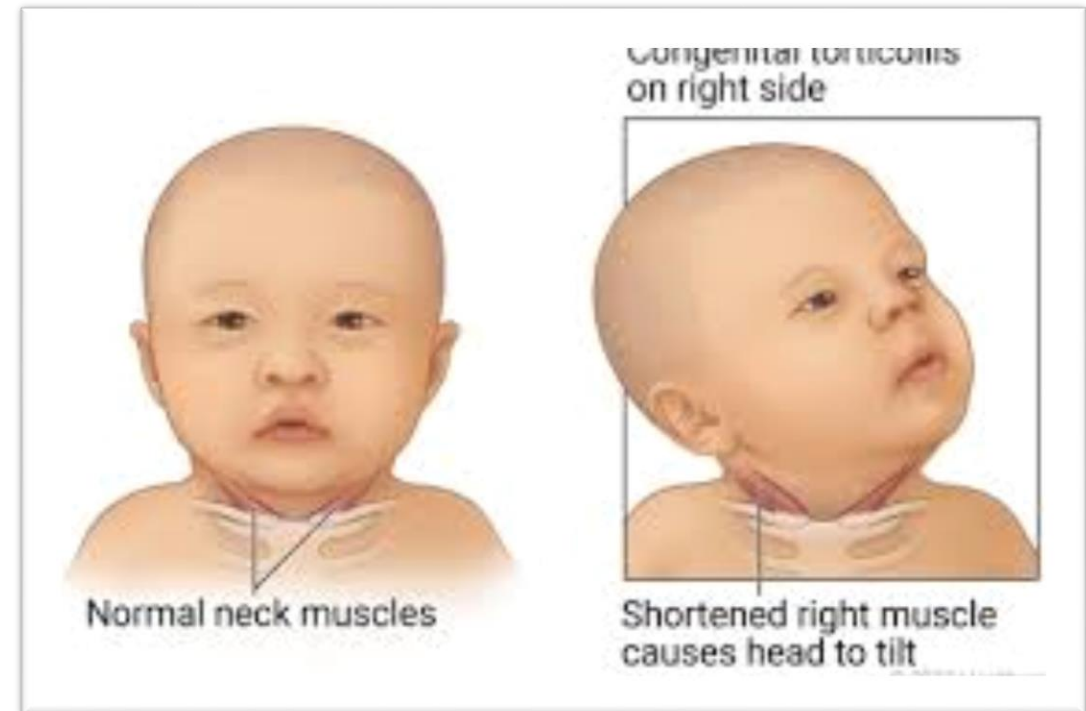


Neck

- Abnormalities are not common but include :

goiter, cystic hygroma, branchial cleft cysts, teratoma, hemangioma, and lesions of the sternocleidomastoid muscle.

- **Congenital torticollis** causes the head to turn toward and the face to turn away from the affected side .





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- **Redundant skin or webbing** in a female infant suggests intrauterine lymphedema and Turner syndrome .
 - Both clavicles should be palpated for fractures.

• **BOX 95.1** Screening Assessments

- Reaction to light or visual stimuli to estimate visual function
- Craniofacial dysmorphism
- Orbits
- Eyelids
- Lashes
- Ocular motility
- Globes
- Conjunctiva
- Sclera
- Cornea
- Iris
- Pupils
- Red reflex test

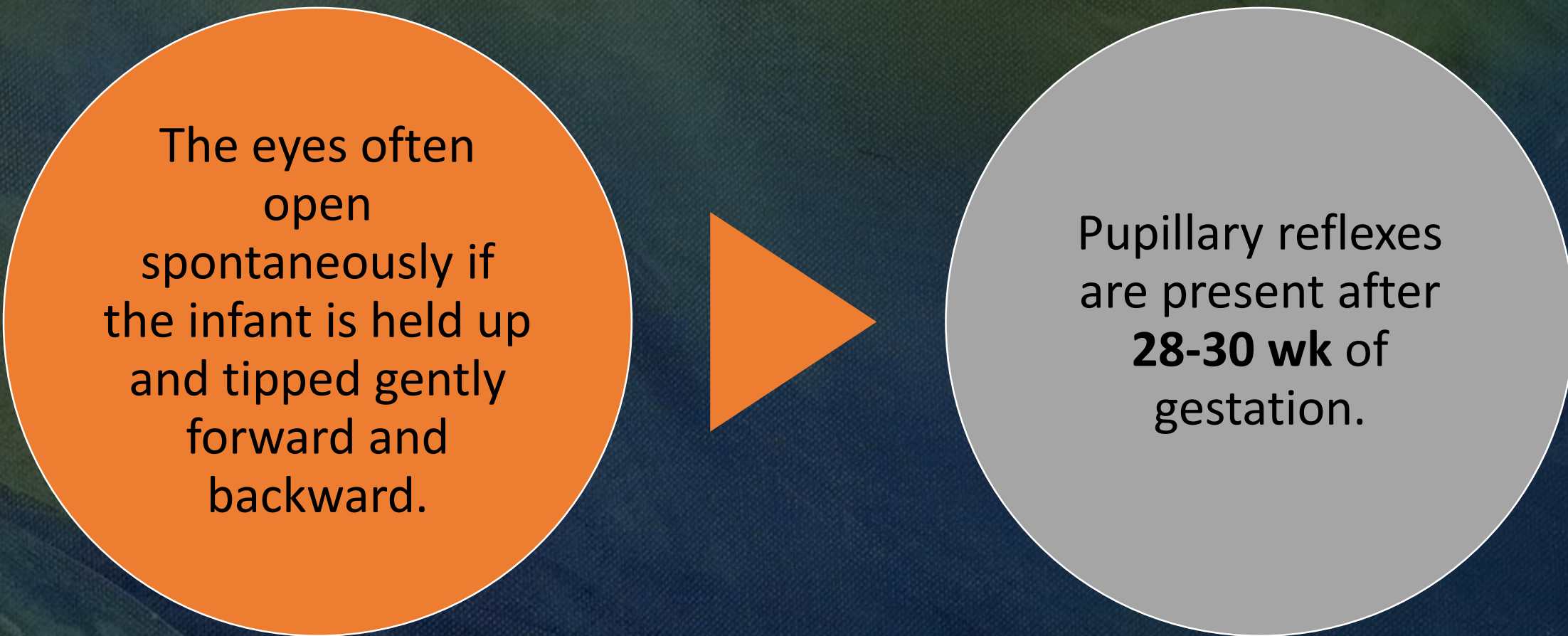
EYE

Ophthalmologic Consultations

A **family history** of congenital cataracts, retinoblastoma , congenital glaucoma, or other serious ocular diseases

Intrauterine infectious disease such as **TORCH**

For **preterm** infants (retinopathy of prematurity)



The eyes often
open
spontaneously if
the infant is held up
and tipped gently
forward and
backward.

Pupillary reflexes
are present after
28-30 wk of
gestation.

- Reflex tearing to irritants is evident shortly after birth.
- However, emotional tearing begins at about 3 weeks of age and is developed at 2-3 months.

Lacrimal Abnormalities


- Watery Eye



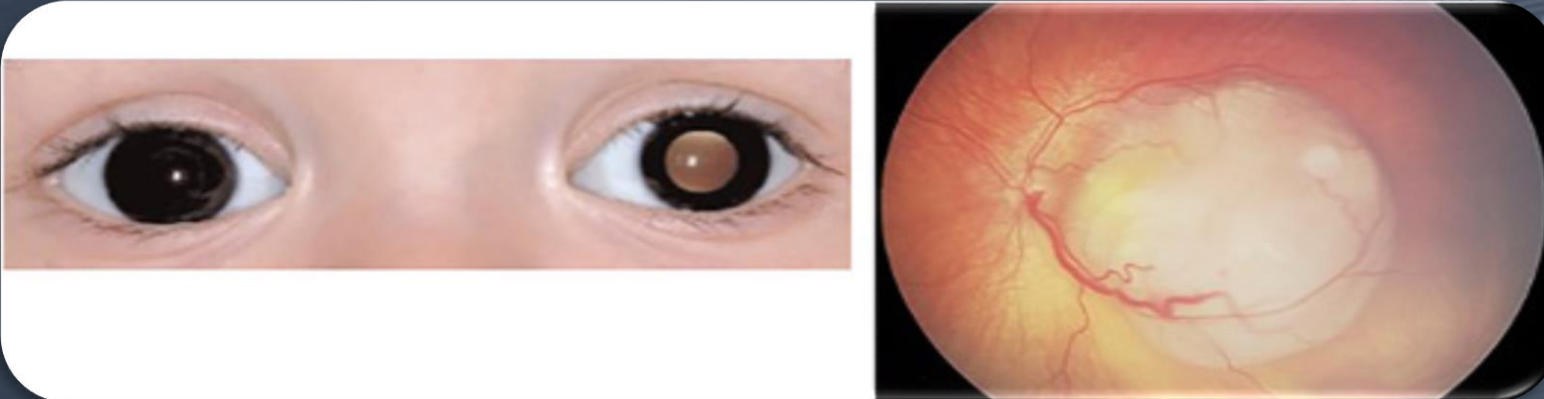
- Dacryocystocele



The presence of bilateral red reflexes suggests the absence of cataracts and intraocular pathology.



Leukokoria suggests cataracts, tumor, chorioretinitis, retinopathy of prematurity, or a persistent hyperplastic primary vitreous





Ocular Findings

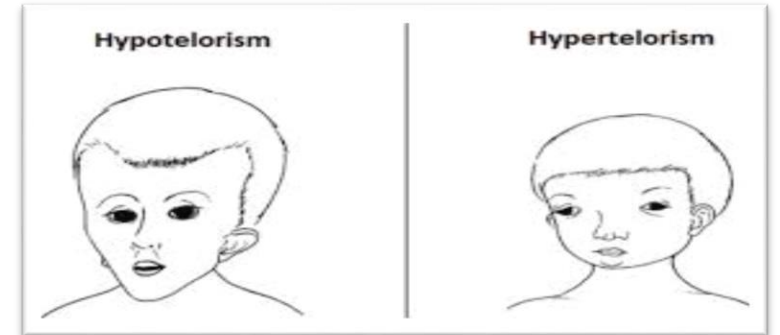
- The horizontal and vertical diameters of the cornea of the newborn are about 9-10 mm.
- Enlarged corneas suggest the diagnosis of **congenital glaucoma**.

Orbital Abnormalities

- Proptosis



- Hypotelorism & Hypertelorism



- Enophthalmos



Eyelid Lesions

- Dermoid Cysts



- Hemangioma



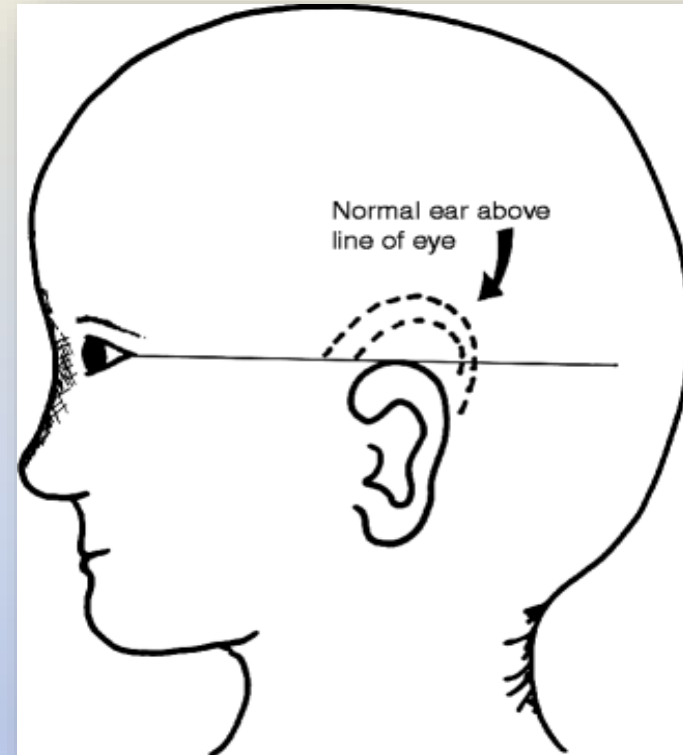
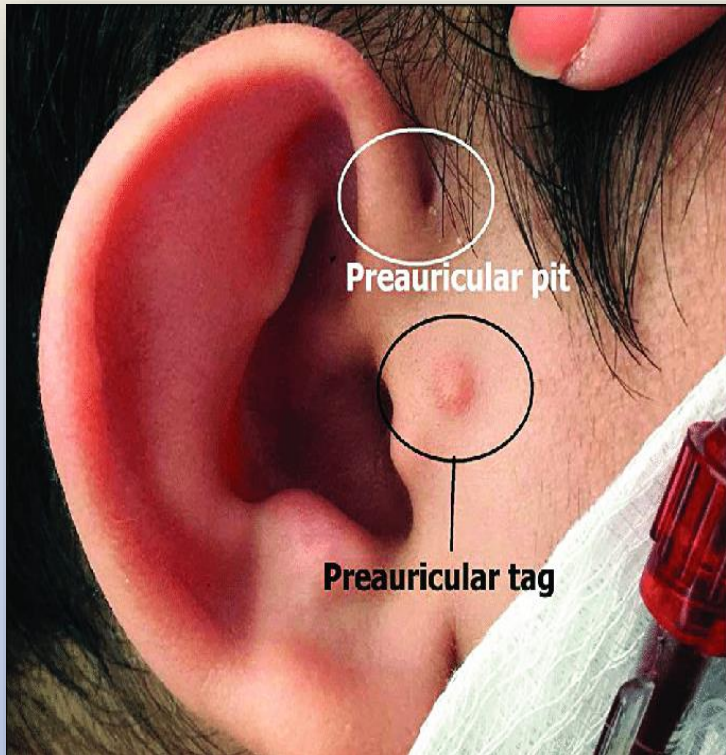
Ears

Deformities of the pinnae are occasionally seen.

Unilateral or bilateral preauricular skin tags occur frequently; if pedunculated, they can be tightly ligated at the base.

The tympanic membrane, easily seen otoscopically, normally appears dull gray.

Periauricular pit or tag / Low set ear



Thank you for your attention

