

Go through when you are  
bored 🙄

"Some conditions To know"

#BA=CELLZ

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# ABDOMINAL WALL DEFECTS

## OMPHALOCELE VS GASTROSCHISIS



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MBBS 4  
2016

Omphalocele vs gastroschisis

## NEURULATION

# NEURAL TUBE DEFECTS

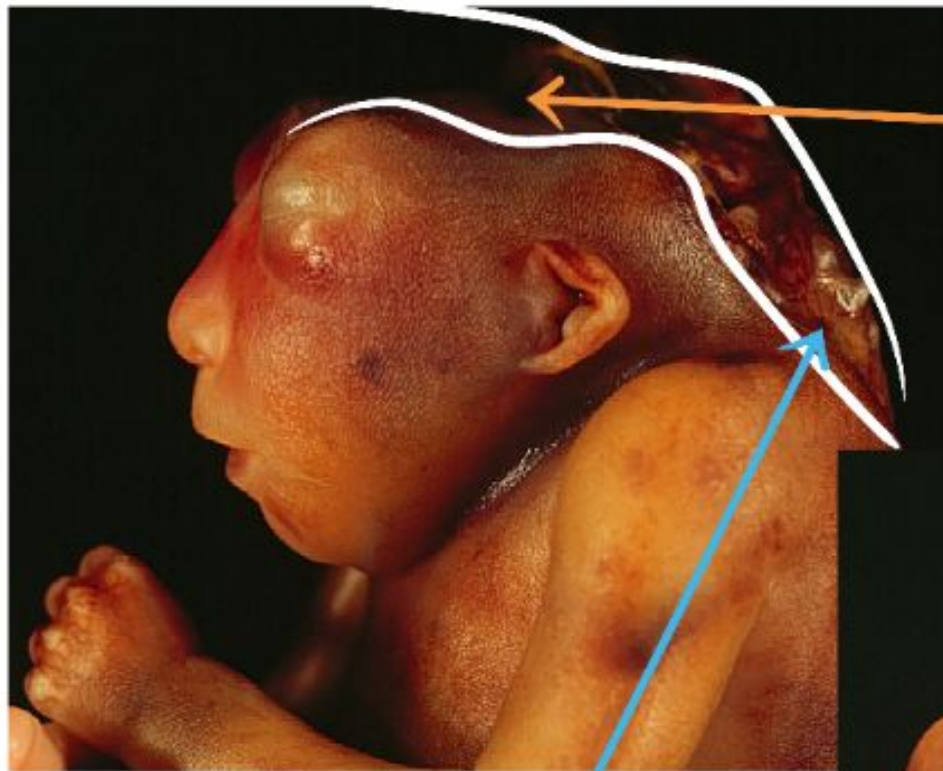
Anencephaly

Rachischisis

Spina bifida

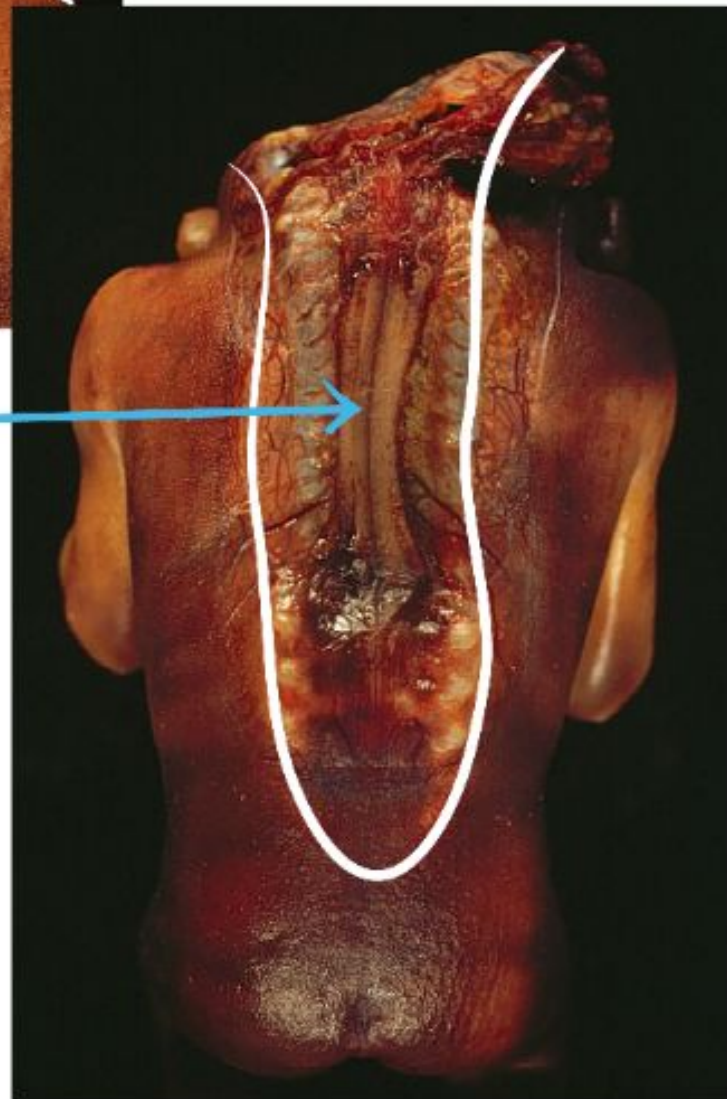
NEET PG / NEXT / FMGE / AIIMS / USMLE

Neurulation & Neural Tube Defects |  
Anencephaly vs Spina Bifida vs ...



Cranioschisis

Rachischisis



Craniorachischisis (aka total dysraphism) - Neuroanatomy ...

Font Paragraph Drawing

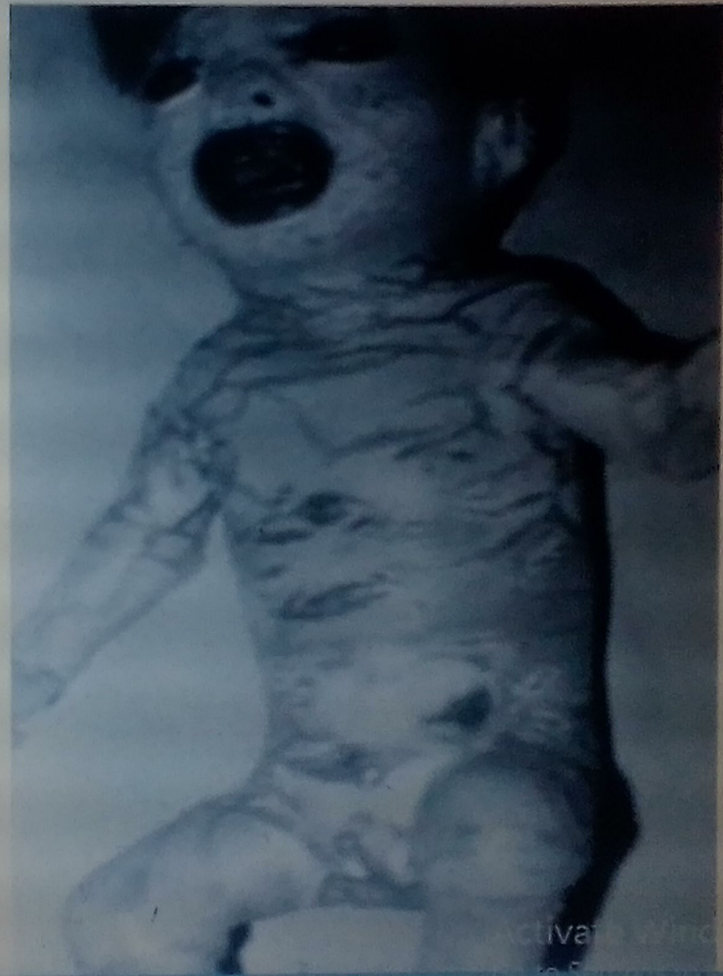
## SLIDE 20

A. Identify condition

**Ichthyosis**

B. What is the main problem in this condition

**Abnormal production of keratin**



SLIDE 15



A. Identify condition

Anencephaly

B. What causes this condition

Failure of the cranial pole of the neural tube to close

## SLIDE 11

A. Identify condition

Spina bifida

B. What is the cause of the condition

Failure of the caudal pole of the neural tube to close



## SLIDE 7

A. Identify the condition

Sacrococcygeal teratoma

B. What is the cause of this condition

Remnants of the primitive streak



Activate Windows

73%

10°C Mostly clear

# Neural tube defects (NTD's)

Neural tube doesn't form right, and the baby's brain or spine is damaged.

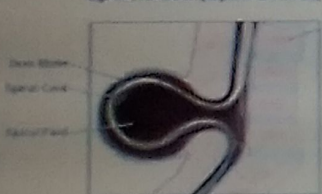
Happens within the first few weeks of pregnancy often before a woman knows that she is pregnant.

Can cause lifelong disability or death.



anencephaly

Spina Bifida (Open Defect)



Many NTDs (up to 70%) can be prevented by getting enough Vitamin B9 (folic acid) every day, starting before a woman gets pregnant.

spina bifida



**Figure 6.20** Monozygotic twins with twin transfusion syndrome. Placental vascular anastomoses produced unbalanced blood flow to the two fetuses.



**Figure 6.19** Fetus papyraceus. One twin is larger, and the other has been compressed and mummified, hence the term papyraceus.



*Figure 7-34.* A, Parasitic twins, anterior view. Note normal tone and posture of fully-developed host twin with meconium staining; exstrophy of the bladder in both host and parasitic twins; exposed small bowel in parasitic twin; and fully formed right lower limb with normal tone and flexion in the parasitic twin. (Courtesy of Dr. Linda J Juretschke, The Ronald McDonald Children's Hospital of Loyola University Medical Center, Maywood, Illinois, USA.) B, Parasitic fetus with well-developed lower limbs and pelvis attached to the thorax of an otherwise normal male infant.

# Chemical Agents

Chemical agents and drugs

- **Anticonvulsants** such as Phenytoin
- Effects: facial clefts, craniofacial abnormalities and neural tube defects



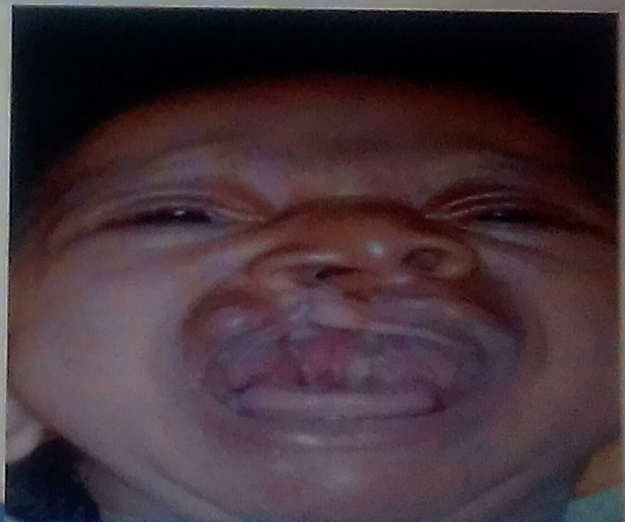
Spina Bifida

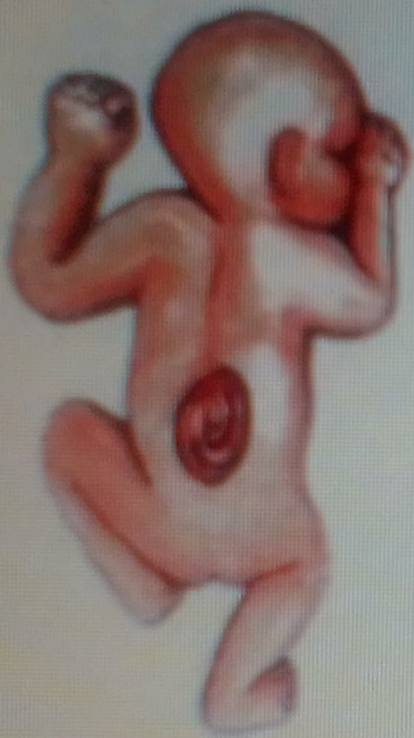


Anencephaly

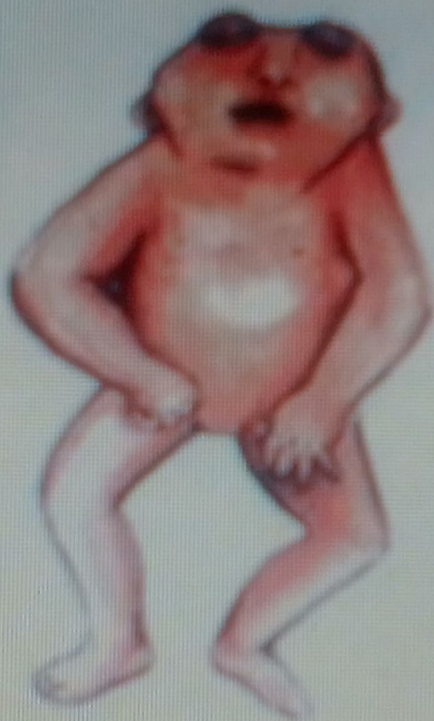


Encephalocele





Spina Bifida



Anencephaly



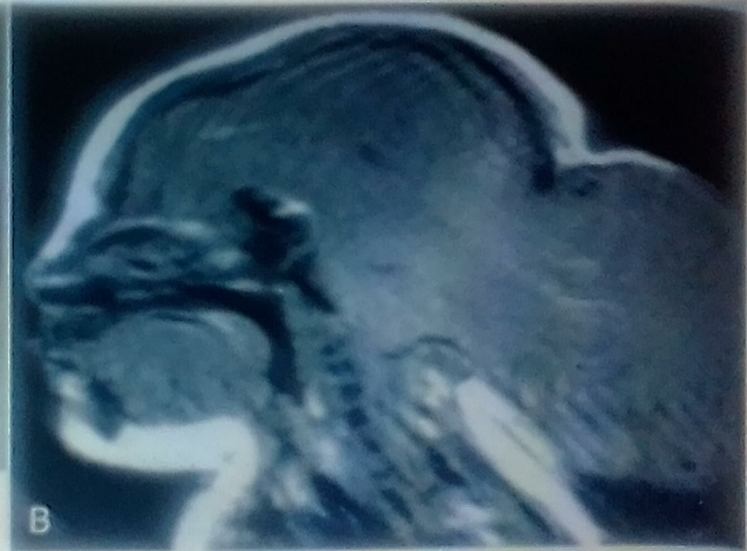
Encephalocele

## Occipital Meningoencephalocele



**Figure 18.36** Fetus with a large occipital meningoencephalocele. Some infants with smaller defects can survive with surgery, and their degree of neurological deficits depends on the amount of neural tissue that is abnormal or lost.

I



Encephalocele  
with corresponding MRI

## Ancephaly, Craniorachischisis



**Figure 18.37** **A.** Fetus with anencephaly (absent brain) due to a lack of closure of the cranial neural folds. Once the folds fail to close, neural tissue is disorganized and is exposed to amniotic fluid, which causes necrosis and loss of tissue. This defect is always fatal, and most pregnancies with such cases are terminated. **B.** Fetus with anencephaly and craniorachischisis. The neural tube has failed to close in cranial and upper spinal cord regions resulting in massive necrosis of neural tissue. The defects illustrated in **A** and **B** can be prevented by maternal use of folic acid (400  $\mu\text{g}$  daily) prior to and during pregnancy.



**Anencephaly  
(cranioschisis)**



**A: Anencephaly    B: Encephalocele  
(cranium bifidum)**



**Anencephaly  
(craniorachischisis)**

**Neural Tube Defects (NTDs): Alpha-fetoprotein**



## Hydrocephalus



**Figure 18.38** Child with severe hydrocephalus. Because the cranial sutures had not closed, pressure from the accumulated cerebrospinal fluid enlarged the head, thinning the bones of the skull and cerebral cortex.





Figure 44.13 Child with 'setting sun' sign due to hydrocephalus.

## Hydrocephalus

Dr. Mukape Mukape I



Figure 44.13 Child with 'setting sun' sign due to hydrocephalus.



**Figure 18.39** Child with microcephaly. This abnormality, due to poor growth of the brain, is frequently associated with intellectual disability.

## Ectopic Pregnancy



A 12-week interstitial gestation which eventually resulted in a hysterectomy

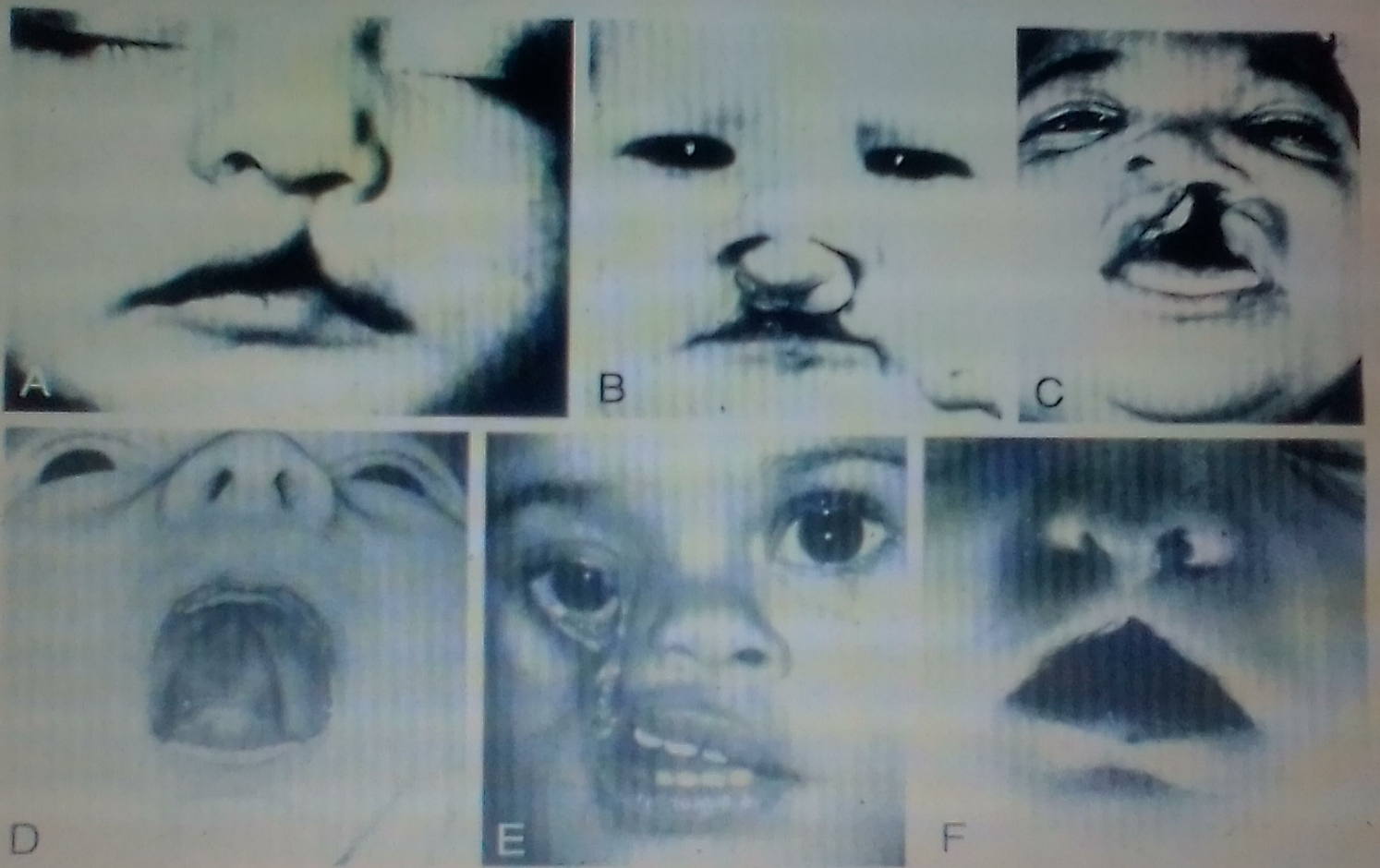


**Figure 4.14** Sacroccocygeal teratoma resulting from remnants of the primitive streak. These tumors may become malignant and are most common in females.



Sirenomelia

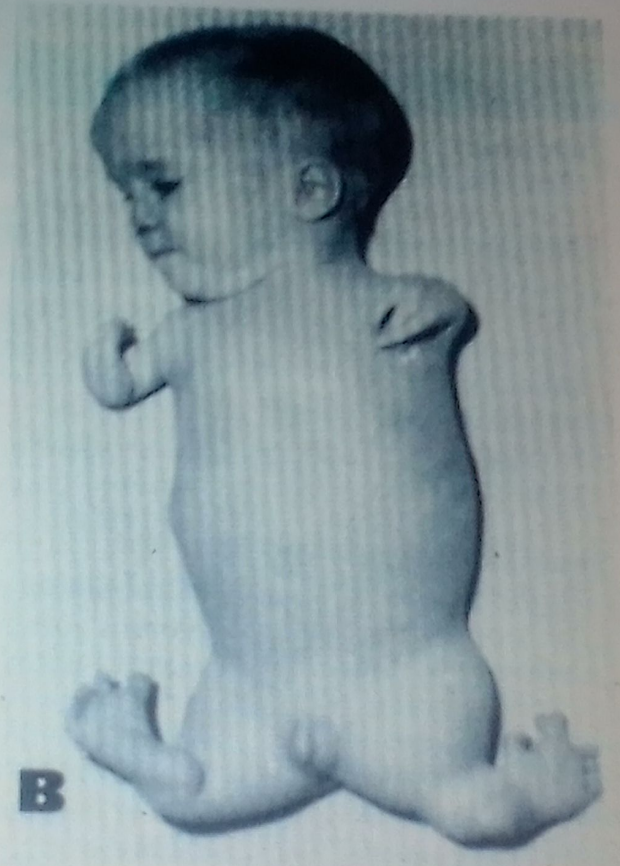




**Figure 15.29** A. Incomplete cleft lip. B. Bilateral cleft lip. C. Cleft lip, cleft jaw, and cleft palate. D. Isolated cleft palate. E. Oblique facial cleft. F. Midline cleft lip.



**Figure 8.19** Digital defects. **A.** Polydactyly, extra digits. **B.** Syndactyly, fused digits. **C.** Cleft foot, lobster claw deformity.



**Figure 7.1** **A.** Child with unilateral amelia. **B.** Child with meromelia. The hand is attached to the trunk by an irregularly shaped bone. Both infants were born to mothers who took thalidomide.



**Figure 7.2** **A.** Characteristic features of a child with fetal alcohol syndrome. **B.** Child with fetal alcohol syndrome illustrating many of the features in the drawing. These children may also have cardiovascular and limb defects.



A

Thoracopagus



B

Pygopagus



C

Craniopagus

Figure 6.21 Thoracopagus, pygopagus, and craniopagus twins. Conjoined twins can be separated only if they have no vital parts in common.



Monochorionic/Monoamniotic



Monochorionic/Diamniotic



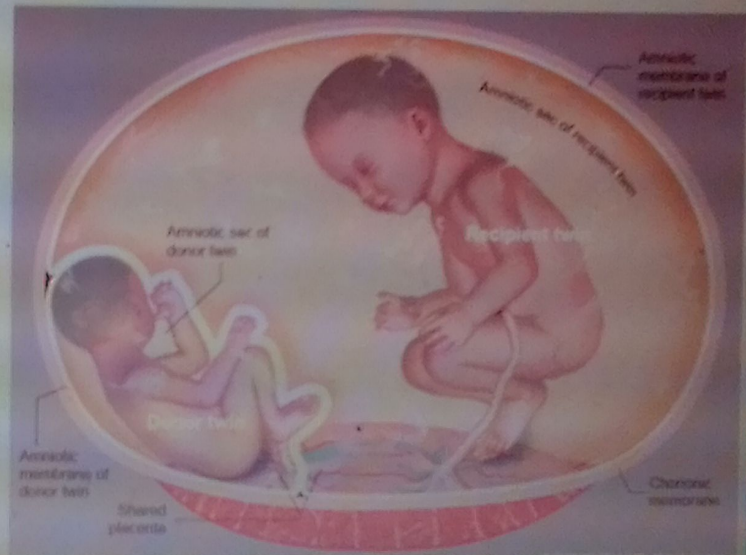
Dichorionic/Diamniotic  
(Fused Placenta)



Dichorionic/Diamniotic  
(Separate Placenta)

# Twin to twin transfusion syndrome

- A condition affecting identical twins or other multiples
- Twins share unequal amounts of the placenta's blood supply
- An imbalance in the blood flow between identical twins who share one placenta known as monochorionic twins





# Conjoined twins: Cephalopagus



# Thoracopagus

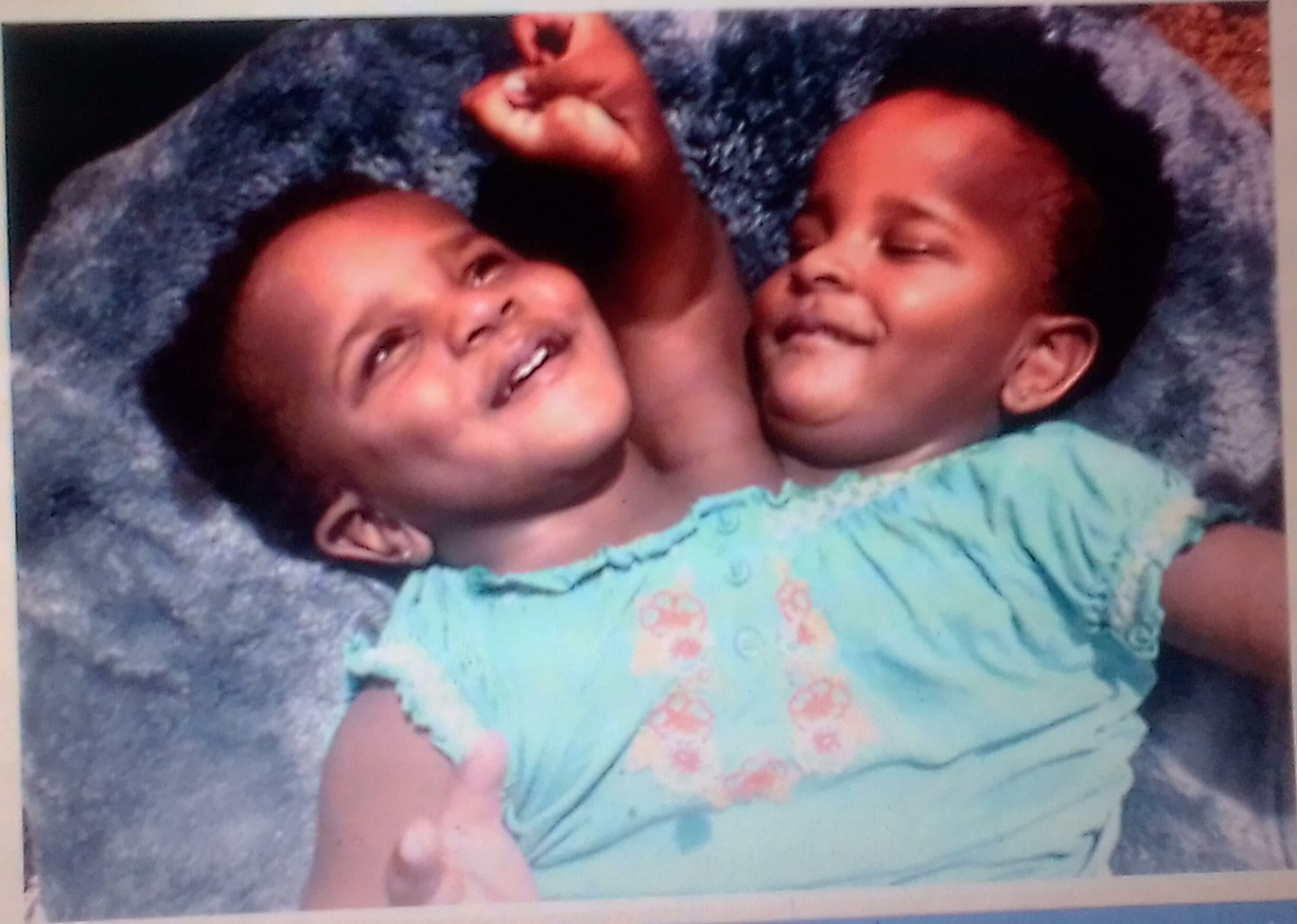


# Omphalopagus



Acti

## Conjoined twins: Parapagus



Act

## Caudal/ ischiopagus



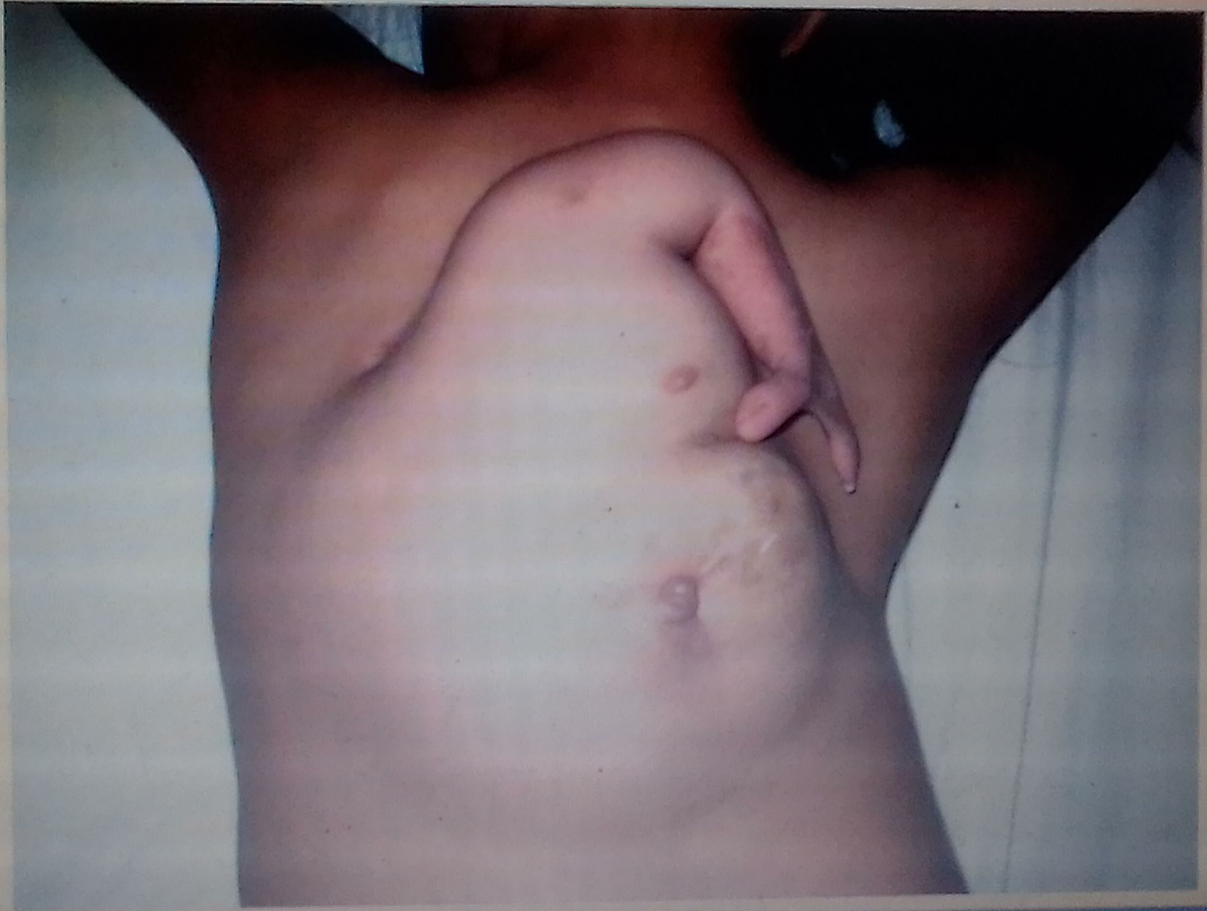
# Parasitic Twins



Paragraf

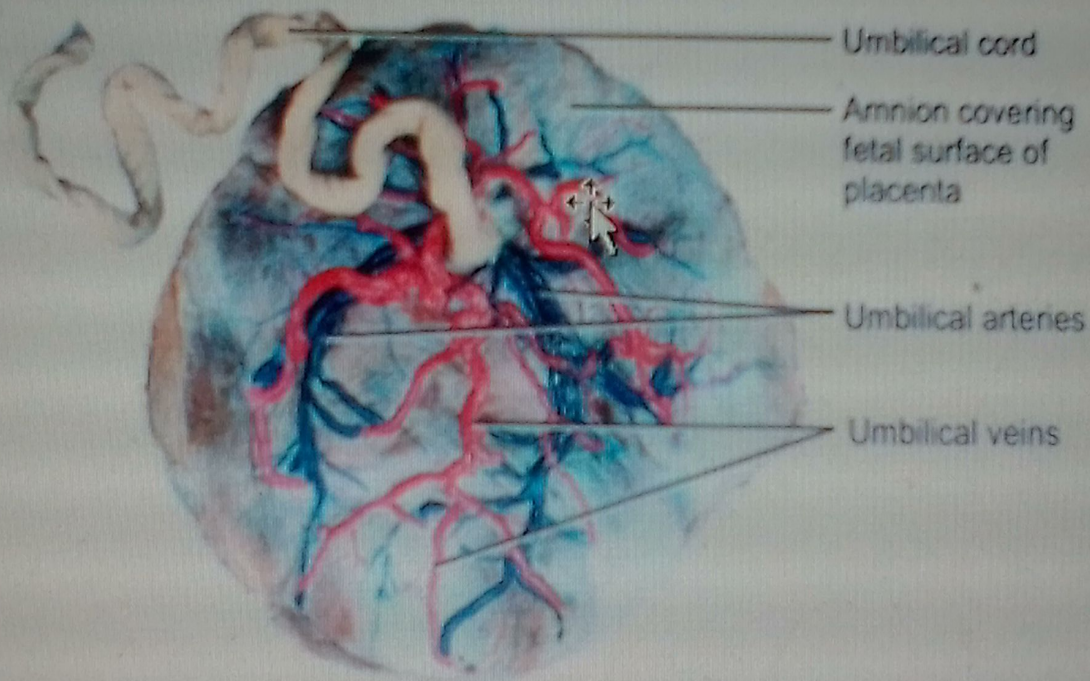
Drawing

# Fetus - Infetu



Activate  
Go to Sett

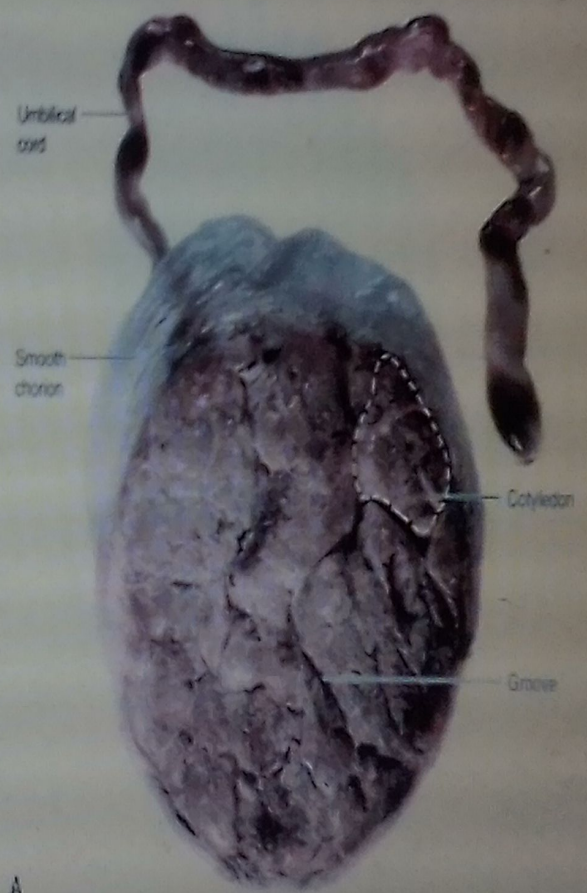
- when fully developed, the placenta is a rounded, disc-like (discoid) structure



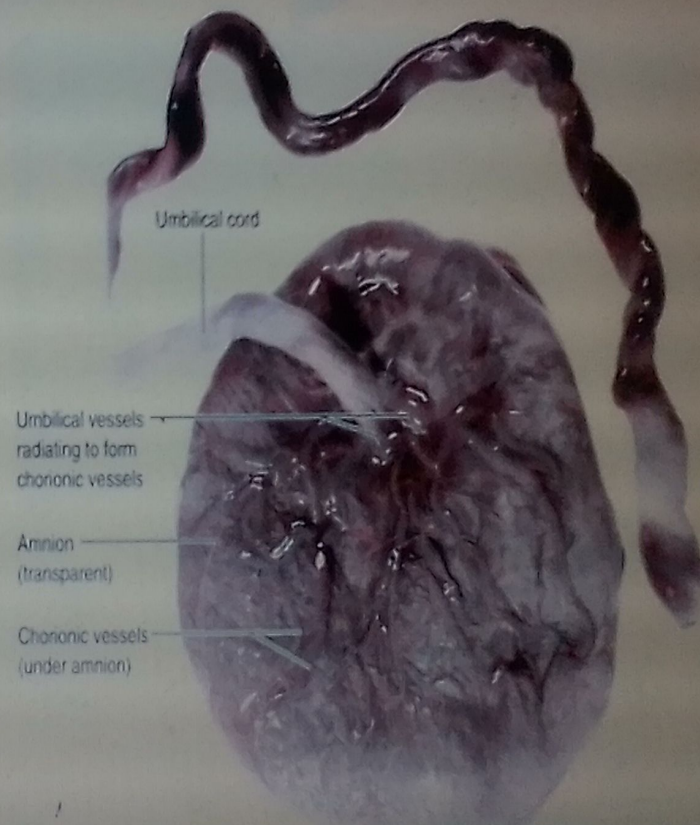
(b) Fetal surface of placenta

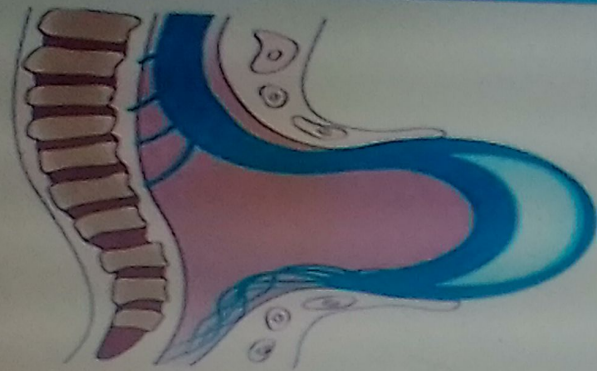
## Cont...

- viewed from the maternal side,
- **cotyledons** - about 15 to 20 slightly bulging villous areas.
- covered by shreds of decidua basalis
- after birth, the placenta is always inspected for **missing cotyledons**.
- cotyledons remains may be source **severe bleeding**.



- **foetal surface:** is smooth and shiny is covered by **amnion**.
- **umbilical cord** is attached close to the center
- **umbilical vessels** radiate from the umbilical cord and branch on the foetal surface to form **chorionic vessels**.
- enter the chorionic villi to form **arteriocapillary-venous system**





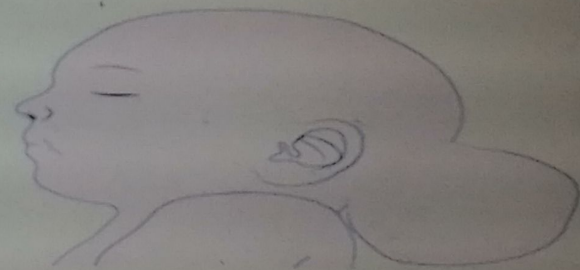
**Myelomeningocele**  
Open spinal cord  
(with a meningeal cyst)



**Anencephaly**  
Open brain and lack  
of skull vault



**Craniorachischisis**  
Completely open brain  
and spinal cord



**Encephalocele**  
Herniation of the meninges  
(and brain)







