Pediatric surgical emergencies

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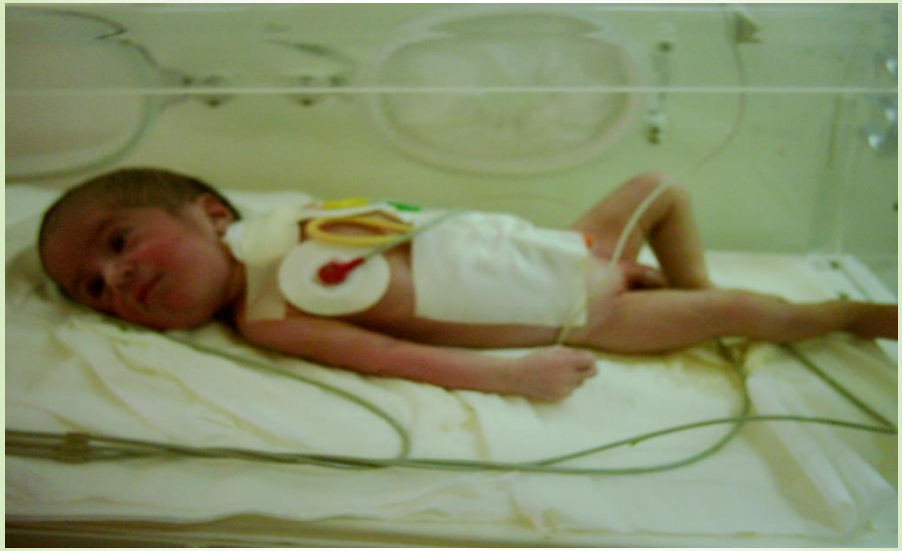
Pediatric surg.emergencies



- **Defention:**

  Agroup Of cong.malformation or acquired disease that need prompt surgical intervention as the main therapeutic modality.

Items to be discussed

- Causes: according to age and system affected
- Pathogenesis
- Management: Antenatal diagnosis & Care
- Post.natal (Transport of a newborn, Preop. Care)
- Investigations to confirm diag, to assess the patient.
- Definitive therapy
- Post.Op care

Neonatal causes :

According to system affected:

- Respiratory
- Pneumothorax
- C.D.H
- O.A+
- T.O.F
- Coanal atresia
- D.D. Cong. Lob. Emphysema

G.I.T

Oesoph, duod, jejun, colonic Atreasia (single or multiple)

Malrotation, Neon.Volvulus

Meconium ileus, Meconium plug

Anorectal malformation

Hirschprung dis.

N.E.C.

Abdominal wall defects
Omphalocele, gastroschisis

Causes

C.N.S:Ruptured Meningocele, Hydroceph.

Neonatal append. Intussusception RARE

Genito. urinary Ingiunoscrotal

Congental bladder neck

Acute scrotum

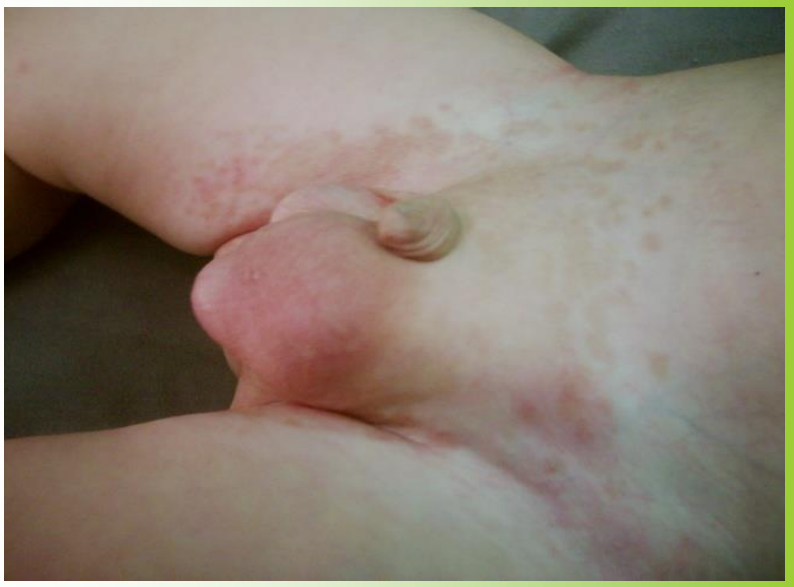
Ov .cysts

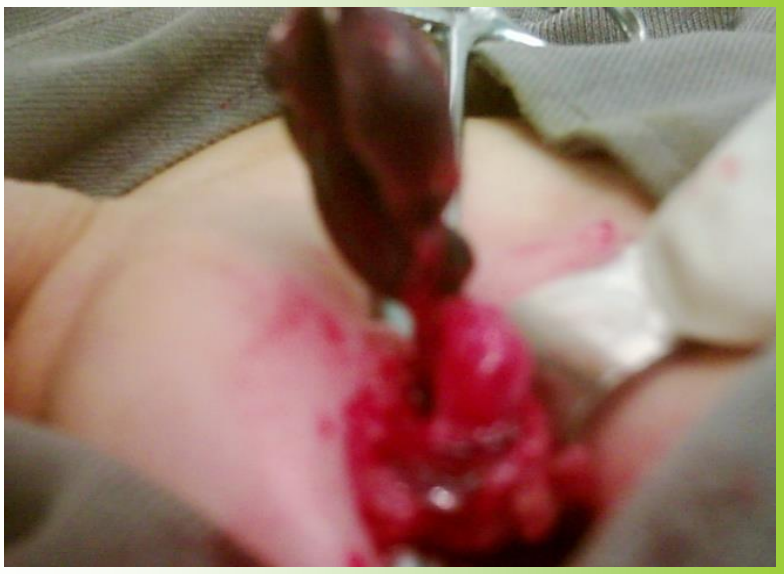
Obst. I H

N.B. Trauma, Burns, not included

Causes from 1st month till the 2nd year :

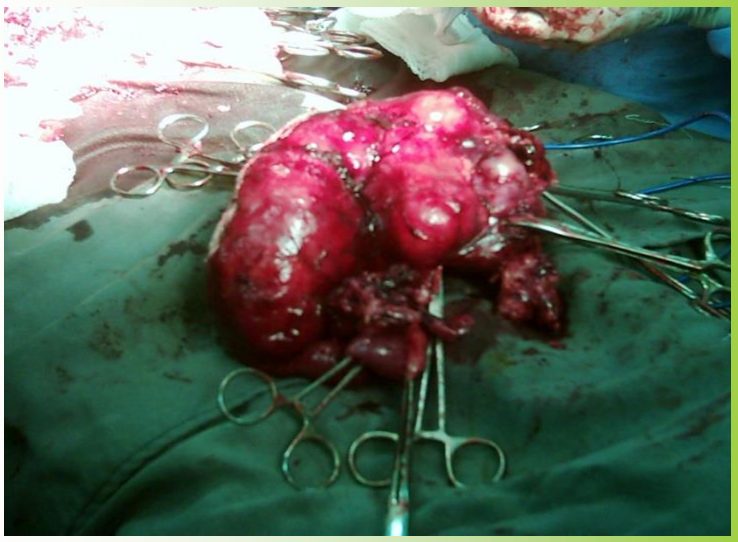
- Strang.O.I.H
- Intussusception
- Malrot.& Volvulus
- Appendicitis
- Adhesions
- Complicated meckles

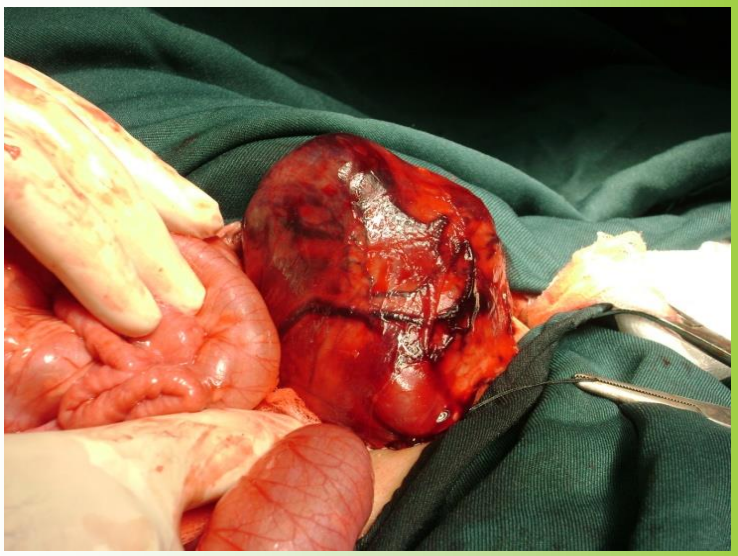




Causes from the 2nd till the 12th years :

- Appendicitis
- Intussus. (2ndry)
- Tumors
- Adhesions





Causes in adolescents :

- Testicular & Ovarian torsion
- Inflammatory bowel disease
- Appendicitis

Diagnosis :

Antenatal

Real Time u/s	Non invasive. C.D.H. O.A.	Intest. obst.
Three dimensions	Abd.wall defects	Sacrococcygeal teratoma

Maternal serum A .feto protein

Early diagnosis = life saving + better prognosis

Clinical presentation :

Differs according to cause

C.D.H. What to do at labour?

O.A.+-T.O.F.

Intest.obst. (atresia, malrot., Hirshsps, dis.)

Abd.wall defects.

Appendicits

50% seen perforated

50% seen by pediatrician

Investigation

1) To confirm diag.: radiological diagnostic &Therapeutic (Meconium plug, ileus, intuss .).

2) Base line Lab. data (C.B.C.,RBS, Ca, Na, K,...).

3) Other congenital anomaly.

Management

Neonatal transport:(body temp.,air way O2, fluid+ electrolytes + ABO)

Misconcept C.D.H &
T.O.F….etc.= immediate Surgery

C D H. What is new ,problems, future.

Oesophgeal Atresia
With or without fistula

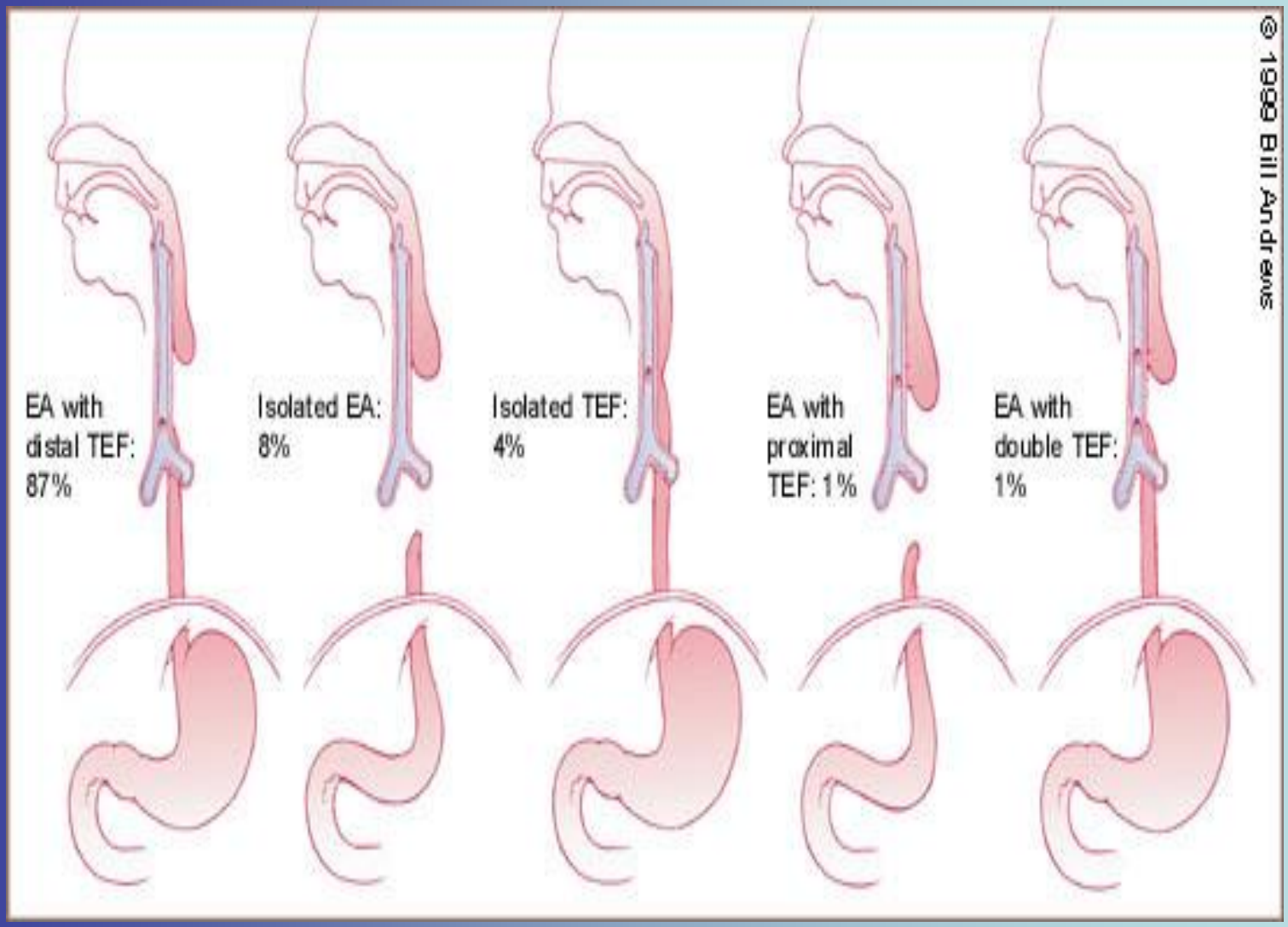
Repeated accumulation of frothy saliva

Surgery after proper resuscitation.

Incidence:1/5000 live births

Etiology: Defective division of the proximal foregut into Ventral tracheal tube and Dorsal esophageal tube

Types :


EA with distal TEF: 87%
Isolated EA: 8%
Isolated TEF: 4%
EA with proximal TEF: 1%
EA with double TEF: 1%
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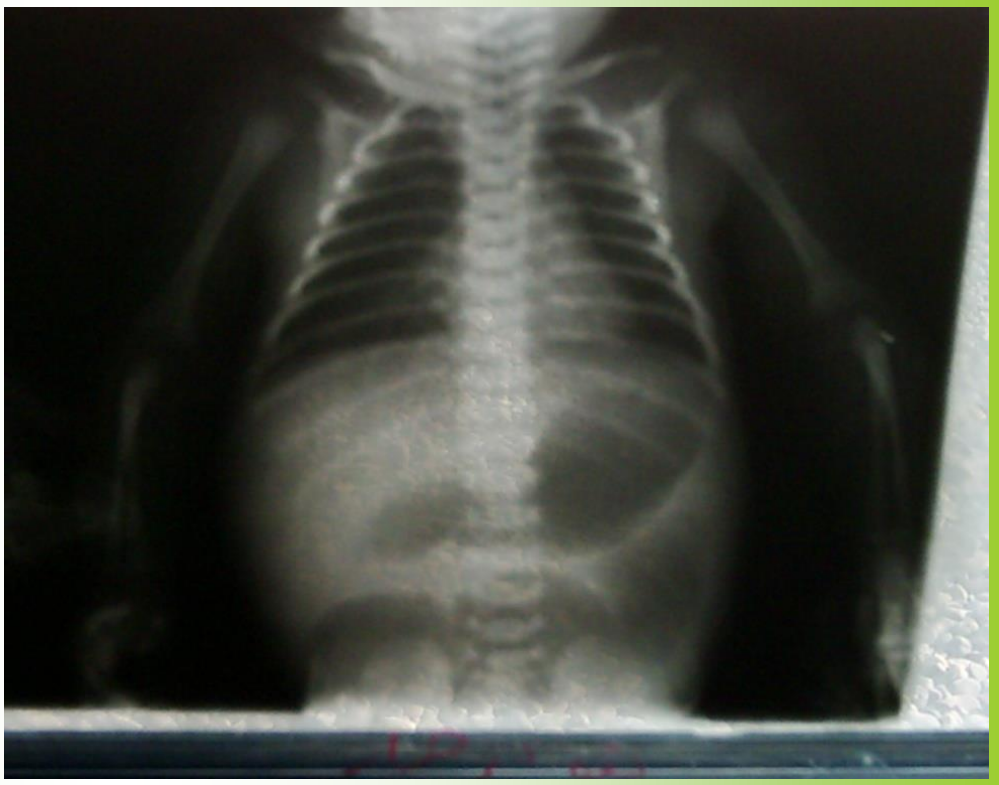
Continue….

Pathophysiology

Aspiration of Saliva & Milk

Regurg. Gastric acid>>>> pneumonitis



Associated anomalies VACTERL. Overall=50%-70%

Diagnosis

Antenatal

Importance	Polyhydramnios	U.S. No or minimal gastric bubble

Clinical Picture

Frothy saliva	Chocking &Cyanosis	R.D.S.	+Ve catheter test.

N.B. No milk in suspecious case

Investigations

Catheter test, How?

Plain Xray .>>>Catheter + Pneumonia

Base line Lab . data

To detect assossiated anomalies

Treatment

Pre-op.

I.C.U.	Low pressure suction	I.V. Fluids+ antibiotics+ Vit.K	Resp. support

Operative

When, specifications of op. room. How?

Post. Op. care

I.C.U.

Prognostic factors

Early diagnosis

Body wt.

Assossiated Cong.anomalies (Cardiac)

Pneumonia. A. B. C.

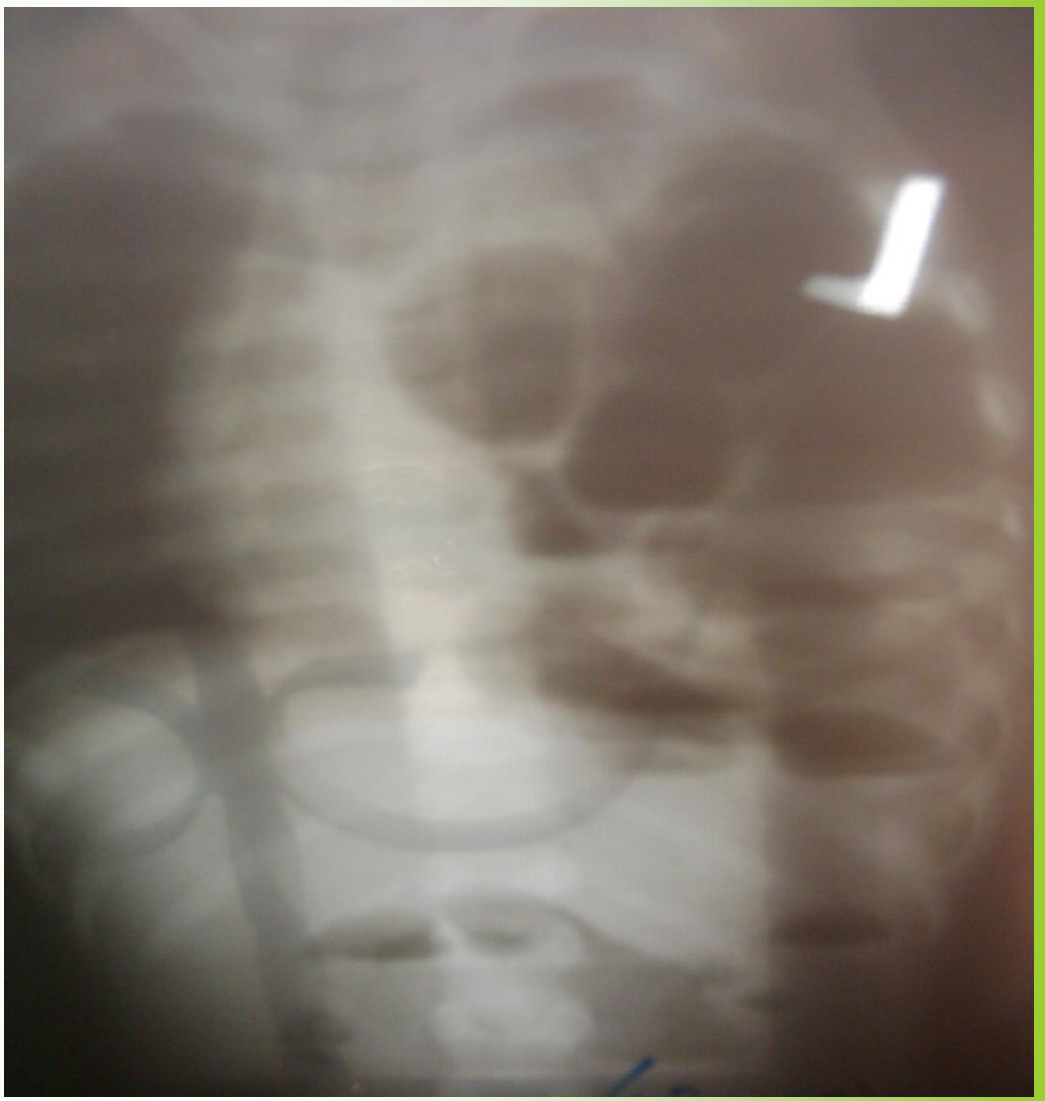
Congenital D.H.

A: 1/2000-5000 birth
1/3 of infants with C.D.H are still born

B: M > F (slightly)

C: 80% left 20% right

D: Familial: 2%
(1st degree relative)



Cause : unknown

Teratogenic drugs

Vitamin A deficiency

Genetic influence (13, 18, 21)

Associated anomalies

Associated anomalies

Varies: 40% _ 50%

In still born higher (up to 100%)

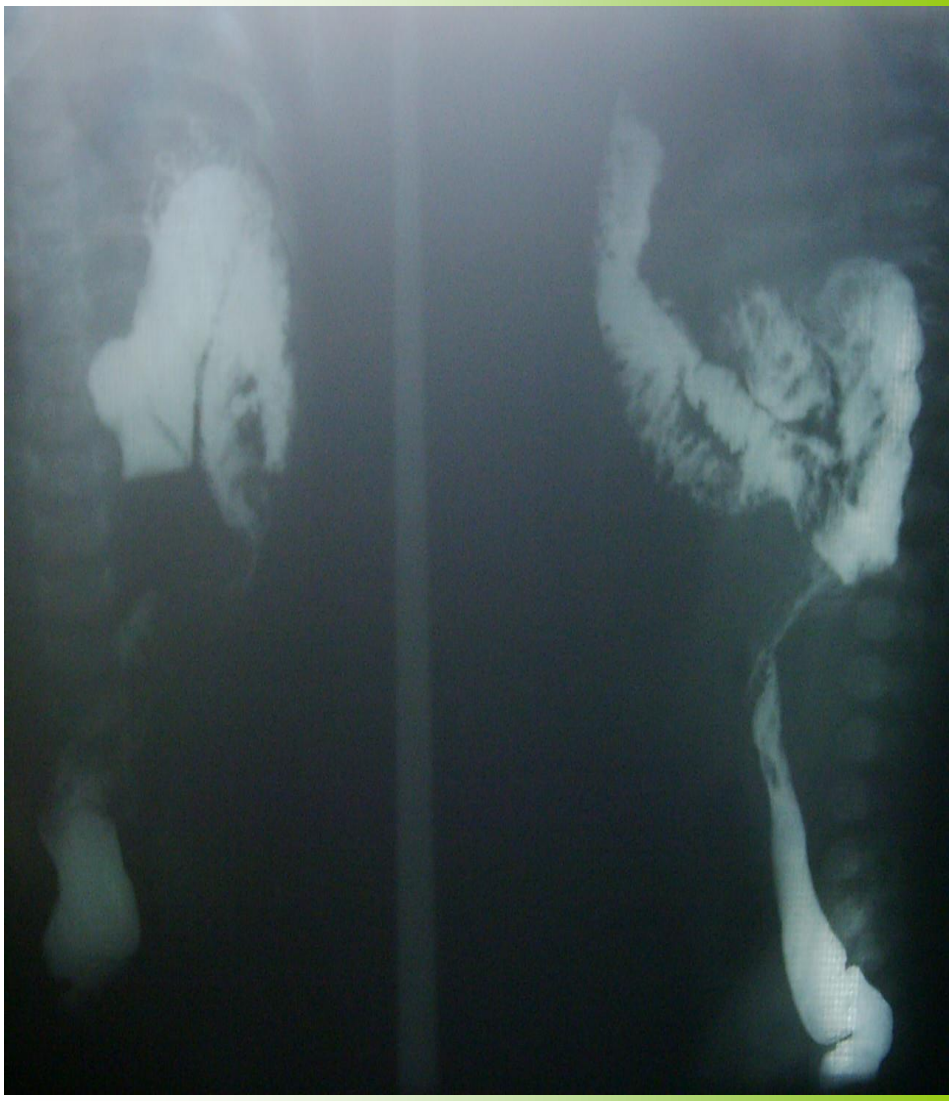
Neural tube defects (commonest)

Cardiac defects (next)

Others: Oesoph. Artesia, omphalocele, cleft palate

Embryology

- Failure of fusion between the vertebral and costal muscle group
- persistence of pleuro peritoneal canal (6^{th} till 8^{th} weeks- Right side earlier)



Pathophysiology

Defects: 2-4 cm **Postrolateral sac**

Contents: left, right

Lung hypoplasia

Primary or secondary

Development:

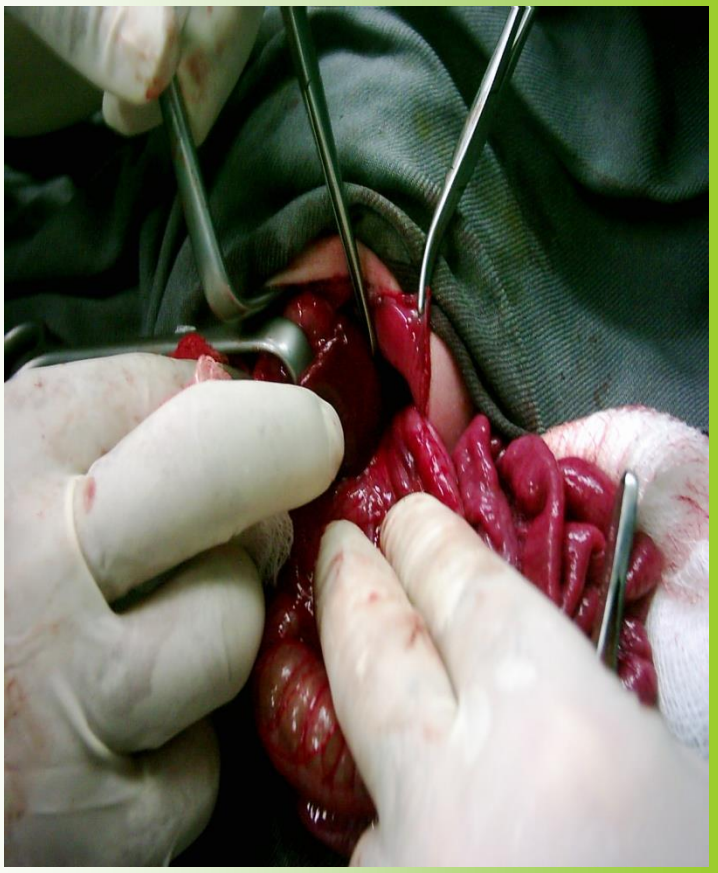
Main bronchus	Alveoli	Vascular bed	High pulmonary vascular resistance
Normal	Compromised	Reduces no. + markedly thickened	

Diagnosis

1) Antenatal: U.S.40%-90% Diagnosing
2) At birth = severely affected, later better prognosis (90% early).
3) Scaphoid abd., asymmetric funnel chest ,Trcheal shift
4) Breath sounds :Absent, Diminished
5) Mediastinal shift: decreased V. return poor perfusion.
6) R.D.S. Cyanosis, sternal retraction, gasping
7) Plain Xray, (N.G. tube in stomach), contrast rarely needed
8) Associations. Echo + U/S.

DDx:

1) Eventration .
2) Cong oesph. atresia.
3) Cong lobar emphysema
4) Cong cystic lung dis.
5) 1ry. Agenesis of the lung.



Prognostic factor:

Anti natal

- Before 24th week, associations
- Right or left
- Contents
  - Liver
  - Stomach
- Measurements (ceph. Cardiac. Thoracic.)

Physiological

- response to mechanical ventilation
- Preductal & Post ductal blood gases

Neonatal Intestinal Obst

Neonatal Intestinal Obst.

Definition	Of intest. Obst.
Classification	Mechanical or Functiona
Mechanical	Cong. Or acquired
Congenital	Atresia, Stenosis, Web
	Mec. Ileus. Duplication
	Anorectal malformations
Extrinsic	Volvulous, Mesentric cyst
	Incar. & Strang. Hernia

Continue….

Acquired	**Intussusception,Mesent. thromb**
Functional	**Defective motility e.g. Hirshsprungs disease, ileus,septicaemia. Drugs;hypothyroidism, prematurity, peritonitis.**
Incidence	**Common causes.Atresia, N.E.C.**

Aetiology

Incidences

1% -3% have a major cong. Anomaly.

25-30% of hospital admission had a birth defect.

10% of NICU admission.

25-30% of ICU death

20% of infant death

Many if not all require surgical correction at sometime.

Aetiology

Aetiology

- Genetic bases
- Chromosomal

Teratogenes

- Drugs
- Radiation
- Viral infection

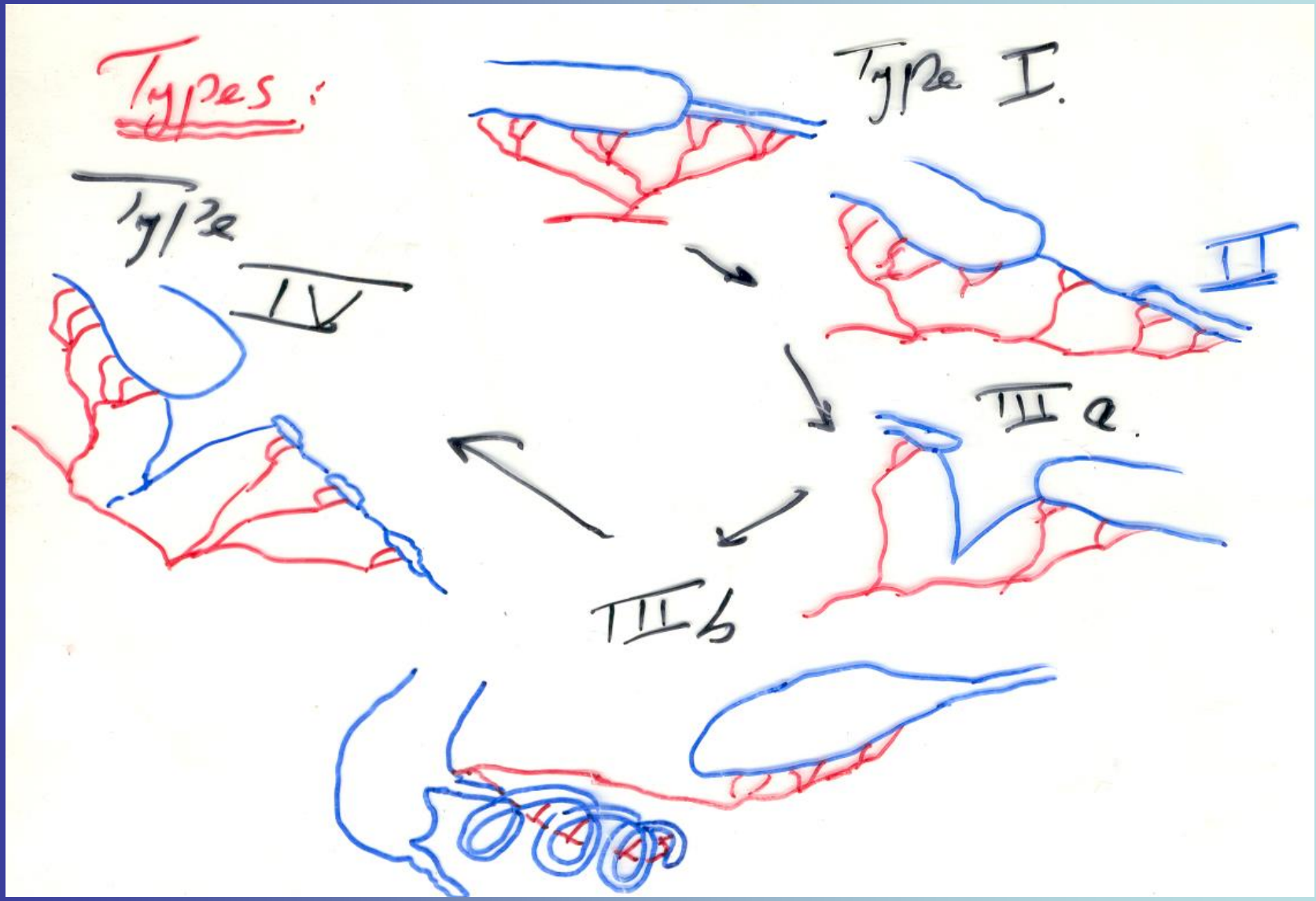
Intrauterine vascular accidents

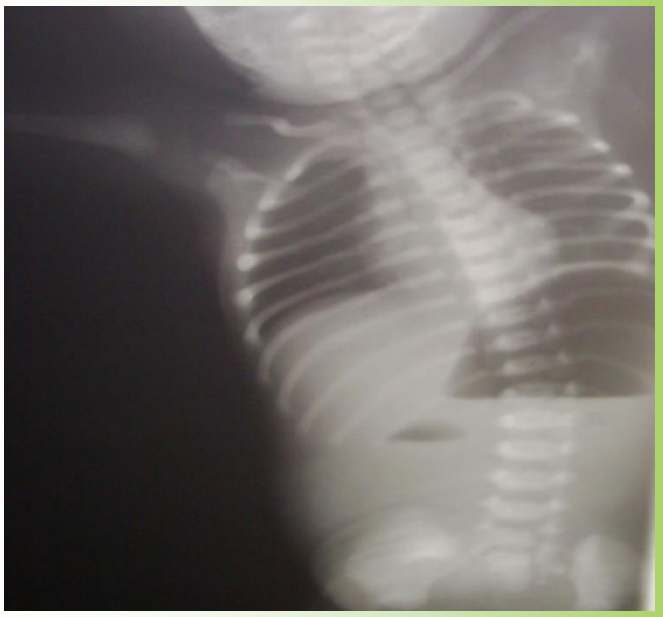
Continue….

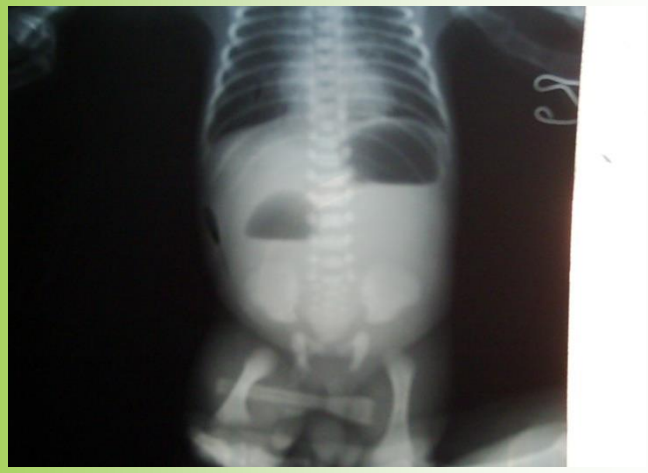
Duod. Obst. 1/10000 **40% of int. atresia**	**30% associated** **Down synd., 50% atresia,** **40% diaph., 10% stenosis**
Jejunoileal obst. **1/1500 live births**	**40% of intest. Atresia.** **95% atresia & 5%stenosis**
Types	**Later on**

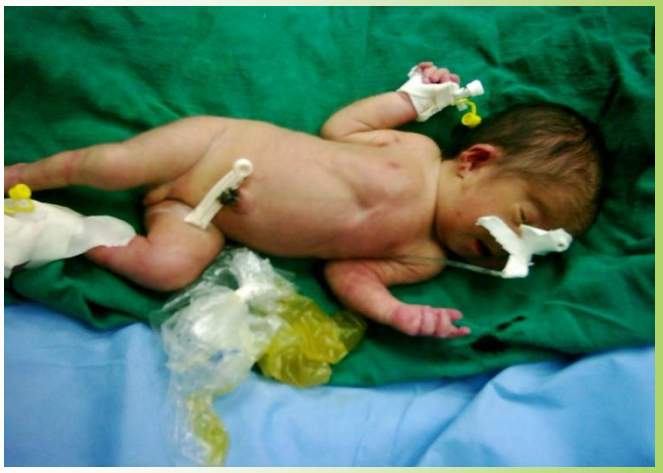
Diagnosis: Antenatal polyhydramnios

U.S.


Types:
Type I.
II
III a
III b
IV







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Cl. Picture=Symptoms & Signs (general, ;local)

Variations	**Discuss**
Investigations	**To assess**
	To confirm e.g. X ray plain & dye
	Biopsy & rectal manometry

Continue.....

TREATMENT

Where?

When? Pre. Op. N.G. tube cather

I., V. fuilds antibiotics Vit K.

How

Post. Op. care, I.C.U. What to do?

THANKS FOR ALL