OESOPHAGEAL ATRESIA

Oesophageal Atresia Classification.

Gross Classification

1.OA without fistula 6-8%A

2.Upper pouch fistula with distal atresia 10%

3.Upper pouch atresia with distal fistula 85%

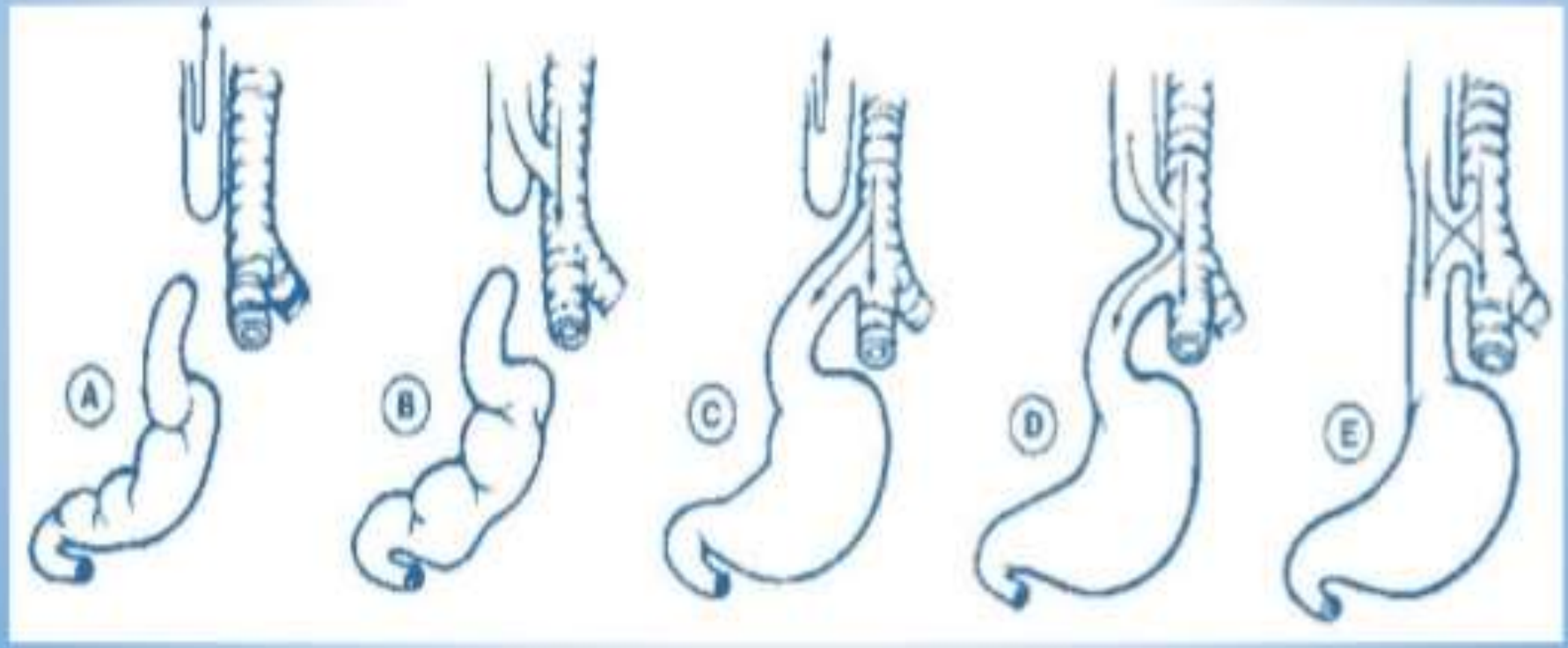
4.Double oesophageal fistula1%

5.H-type fistula 4%

Oesophageal stenosis} rare

Membranous atresia} rare

ESOPHAGEAL ATRESIA WITH TRACHEO-ESOPHAGIAL FISTULA



Pathophysiology in OA with fistula Gross type III (commonest)

- 1. Escape of air through the fistula causing abdominal distension and splinting of diaphragm leading to respiratory distress.
- 2.Gastric contents spill into the lungs leading to pneumonitis and respiratory distress.
- 3.Inadvertent feeding leads to aspiration pneumonitis and respiratory distress.
- 4.Upper pouch dilatation presses upon trachea leading to tracheomalacia and respiratory distress.

OESOPHAGEAL ATRESIA

Incidence 1 in 3000 to 4000 live births.

Male predominance.

Associated anomalies

1.Cardiovascular- 10-30%. ASD, VSD, TO Fallot, Right sided aortic arch.

2. GIT- ARM, Duodenal Atresia, malrotation.

3.Musculoskeletal- VACTERAL.

V-vertebral, A- Anorectal, C-cardiac, TE- tracheoesophageal, R- renal, L-limbs.

4. Genitourinary- hypospadias, renal dysplasia

5. Chromosomal- Down's syndrome, Trisomy – 18.

CLINICAL FEATURES

1.Excessive drooling of saliva and frothing in the mouth, **always rule out OE+TOF in the newborn.**

2.Cyanotic episode and choking with feeding.

3. Breathing is noisy because of overflow of secretions and reflux of gastric contents.

4. A stiff 10 F catheter passed orally stops 10-12cm from alveolar ridge.

5. Abdominal distension may be marked in distal fistula.

6. Scaphoid abdomen in OA without fistula.

7. In later stages - fever, tachycardia, pallor, lethargy – shows sepsis

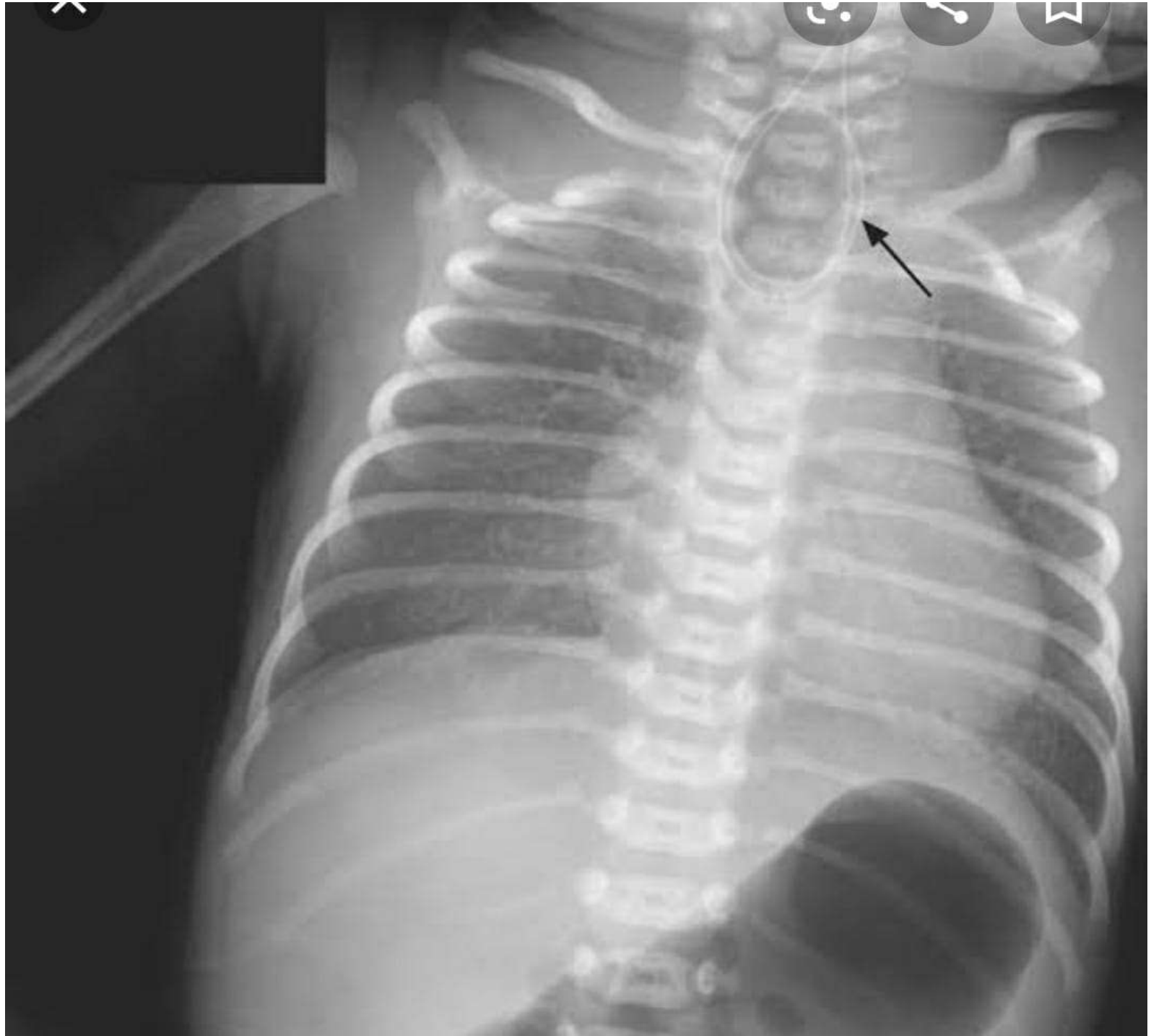
DIAGNOSIS

1. Plain X R Chest and Neck A/P and Lat view with stiff catheter in the upper pouch can give the diagnosis.

2. Babygram- (X ray chest and abdomen) to rule out associated anomalies- heart, vertebral, to look for prescence of abdominal gas, pattern of abdominal gas, double bubble sign in duodenal atresia.

3. Contrast study of pouch rarely done with iso-osmotic and non ionic agents for confirmation.

4. Echocardiography to rule out cardiac anomalies.



MANAGEMENT

Preoperative stabilization for 24-48hrs. in NICU.

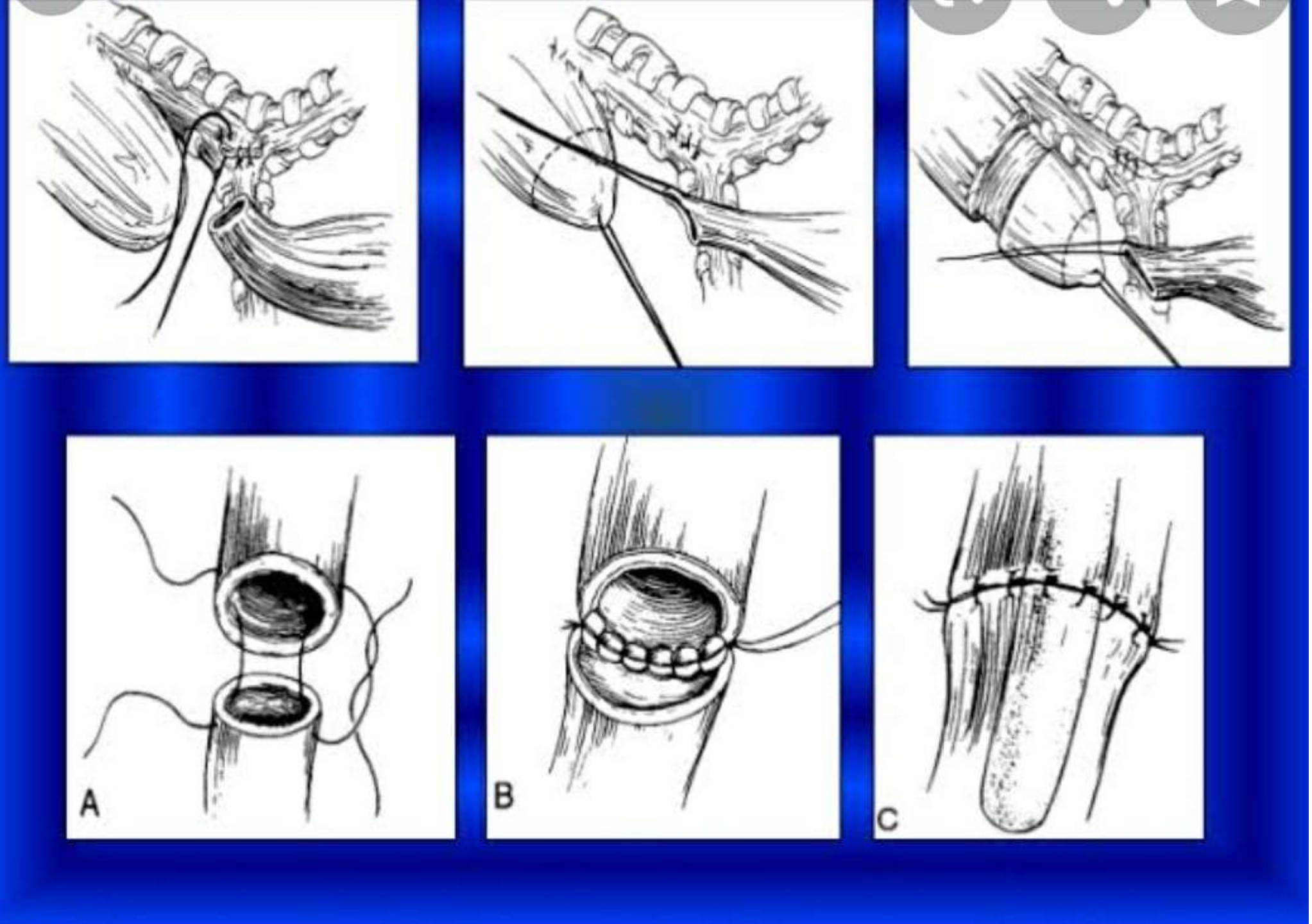
1. Upper pouch suction frequently.
2. Nurse in prone or lateral head up position.
3. Maintain temperature.
4. Blood gas analysis and respiratory support with oxygen supplementation/ ventilation.
5. I/V fluids, antibiotics, ionotropes.

OPERATIVE PROCEDURE

OPEN

- Rt. Posterolateral thoracotomy through 4th intercostal space.
- Extrapleural dissection and anomaly identified.
- Lower pouch fistula divided.
- Upper pouch identified and separated from trachea.
- End to end single layer anastomosis performed with interrupted vicryl suture.
- No. 6 feeding tube kept as transanastomotic stent for decompression of stomach and feeding later on.
- Chest tube placed extrapleurally and incision closed.

Thoracoscopy and Laparoscopic repair is also done these days.


A
B
C

Pure Atresia/Long Gap

- Cervical oesophagostomy with feeding gastrostomy in 1st stage and later on oesophageal replacement with stomach, stomach tube, colon or jejunal interposition at 3-6 months of age.

- **H-Type**- Division of fistula from neck – high type at T2 level

and from thoracic approach in low type at T3 level.

THANKS