ANORECTAL MALFORMATION

- Imperforate anus (Anorectal atresia)
- Incidence- 1 in 4000 to 5000 live births.
- Sex - common in males
- Types-low, intermediate and high.

Low- Translevator - the blind end ends below levator and repair can be done from below.

Intermediate/high- the blind end ends at the level or above the level of levator ani muscle and needs staged repair.

Common anomalies in males

Low type

- Anocutaneous fistula
- Rectoperineal fistula

High

- Rectourethralfistula- bulbar/prostatic
- Rectobladder neck fistula
- Imperforate anus without fistula
- Rectal atresia

Common anomalies in females

Low

- Anocutaneous fistula
- Rectoperineal fistula
- Anovestibular fistula

High type

- Imperforate anus without fistula
- Rectal atresia
- Cloacal anomalies

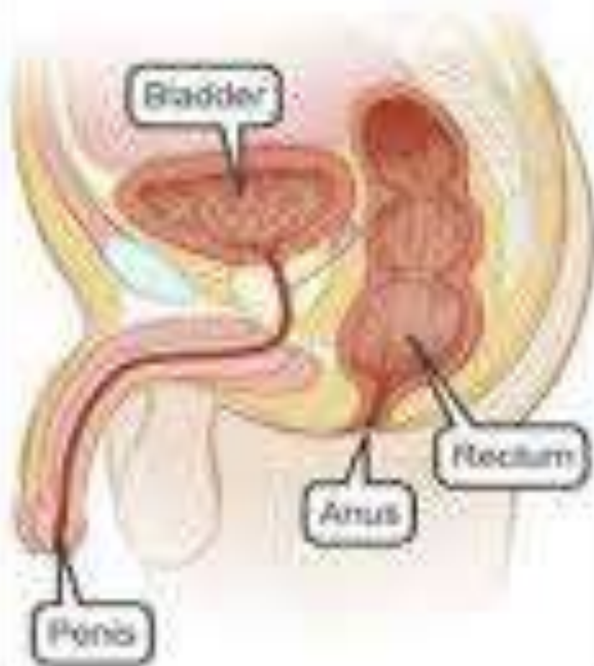
Associated anomalies

- Saccral deformities- absent vertebrae, hemisaccrum, tethered cord syndrome.
- Genitourinary-(50%) hydronephrosis, hydroureteronephrosis, vesicoureteral reflux, renal agenesis.
- Vacteral association- cardiac anomalies, tracheoesophageal fistula, musculoskeletal defects.

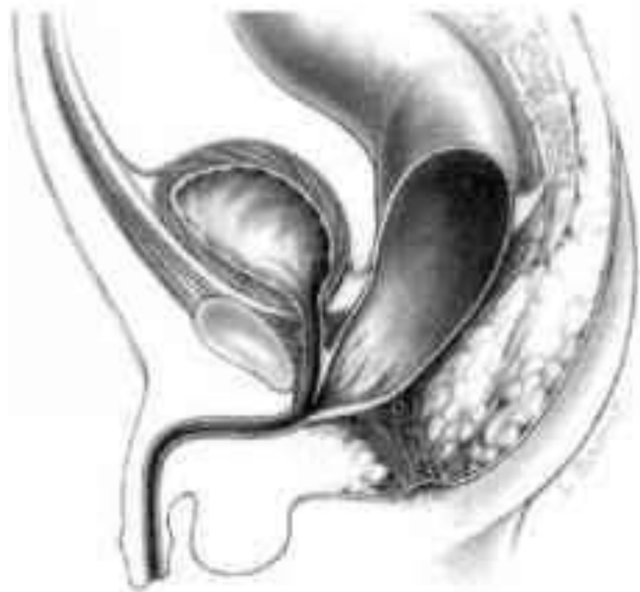
- Low defect (male)- other names are covered anus, anal membrane, bucket handle deformity, anteriorly mislocated anus.
- Rectum is located within sphincter complex except lower part which is anteriorly mislocated.
- There is a fistula which may follow a subepithelial tract and open in perineum, scrotal raphe or even base of penis.
- Diagnosis is straightforward.

diagr

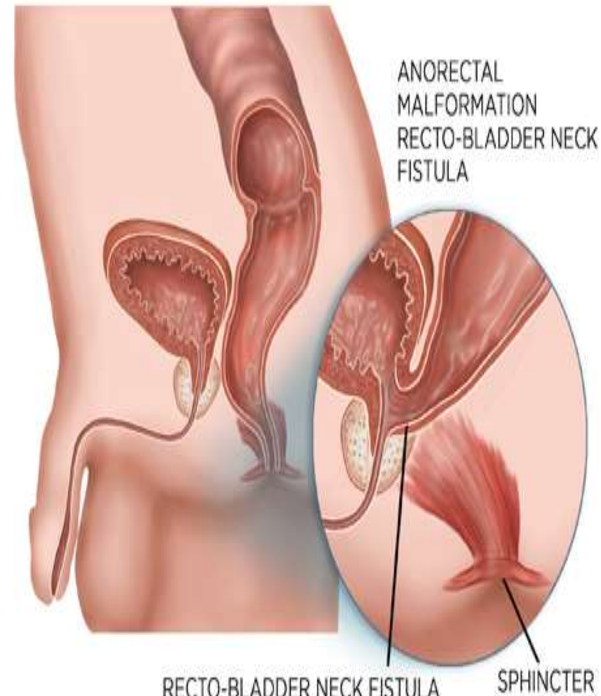
ANORECTAL MALFORMATION

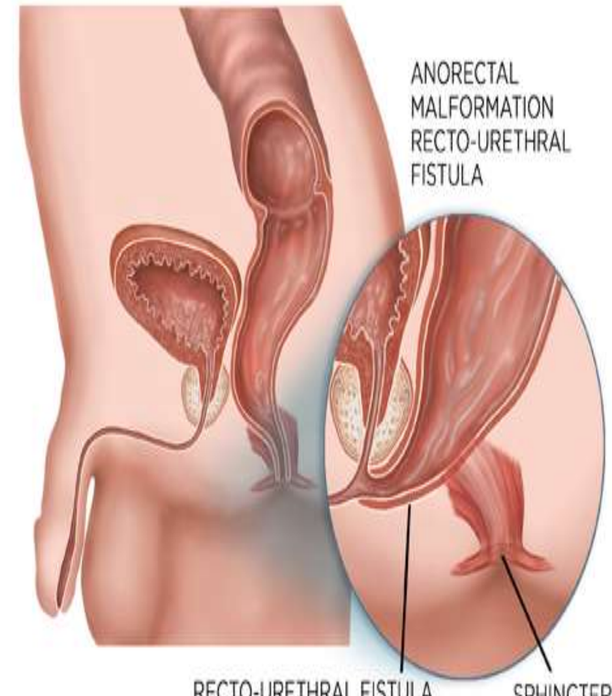


- Rectourethral fistula (bulbar/prostatic).
- Good quality muscle, externally there may be a dimple or groove and patient passes meconium with urine.
- diagr

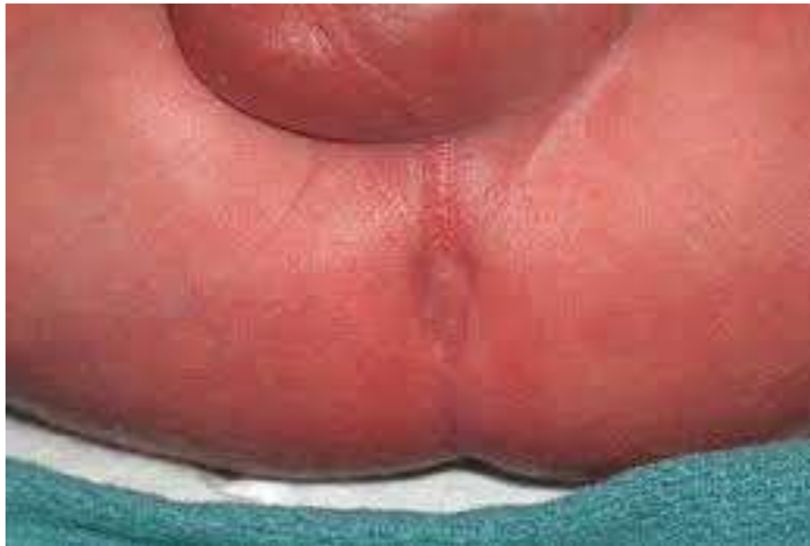


- Rectobladder neck fistula- rectum opens into bladder neck, muscle poorly developed and perineum is flat.
- diag





- Imperforate anus without fistula –rectum ends blindly, muscle complex well developed, 50% have associated Down’s Syndrome.
- diag



- Rectal atresia- rectum is totally atretic or partially stenosis, upper pouch dilated, lower small anal canal about 1-2cm deep, anal opening normal.
- Diag

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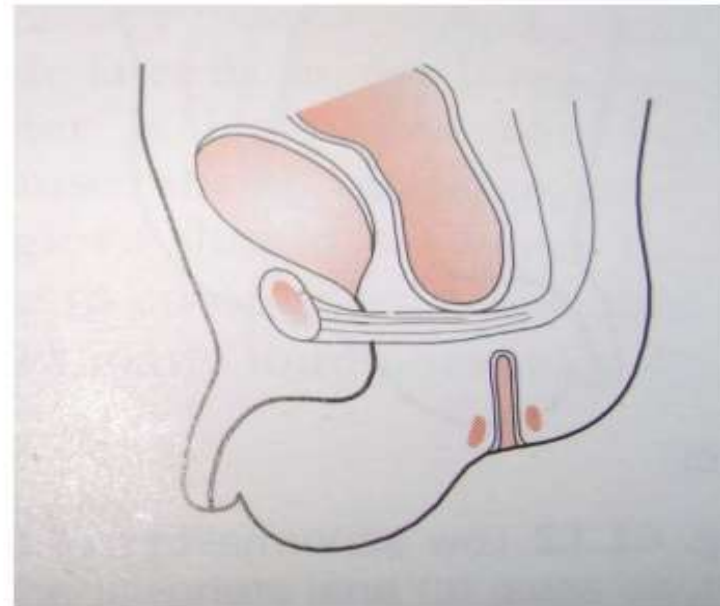
Rectal atresia



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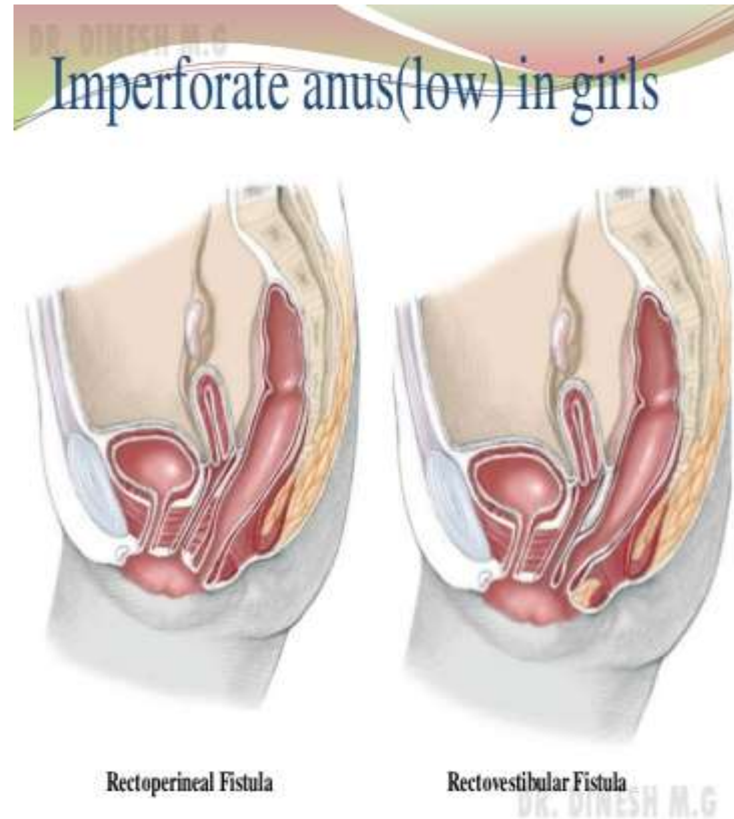
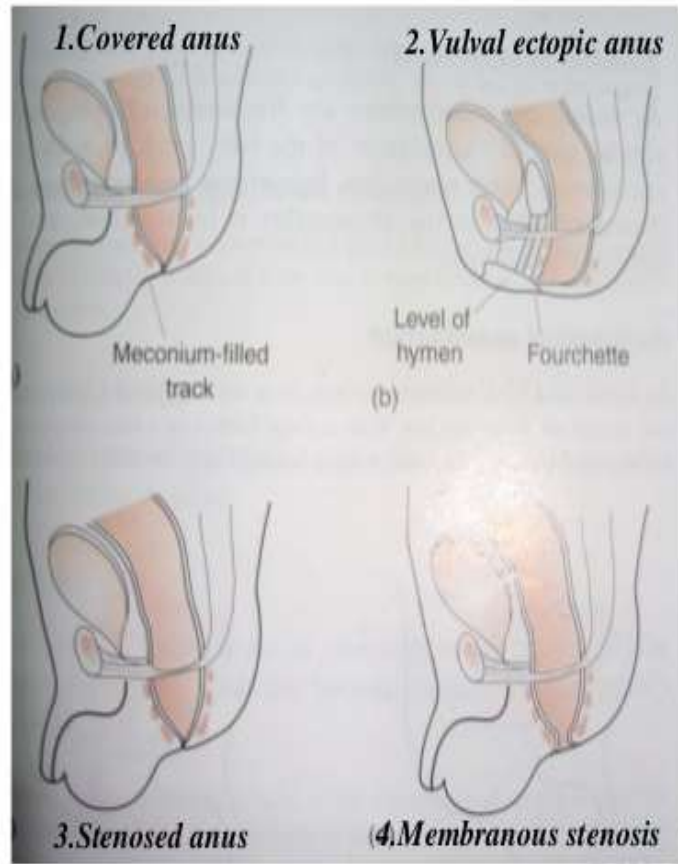
- Anovestibular fistula- most common defect. Perineum shows separate urethral opening, vaginal opening and a third opening in the vestibule with passage of meconium.
- diag

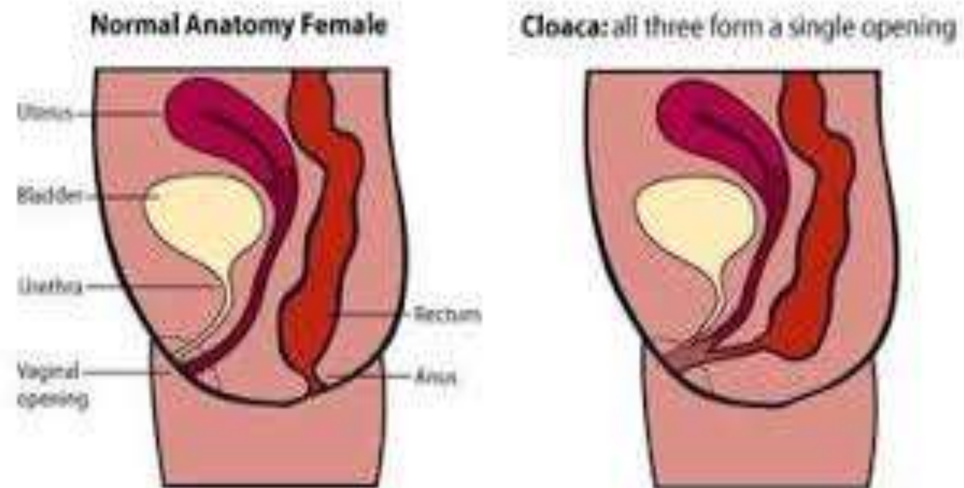


- Imperforate anus without fistula like male.
- diag



- Rectal atresia like male
- diag

- Persistent cloacae- in this rectum, vagina and urinary tract meet and fuse creating a common channel. There is small looking external genitalia.
- diag



Neonatal assessment and management

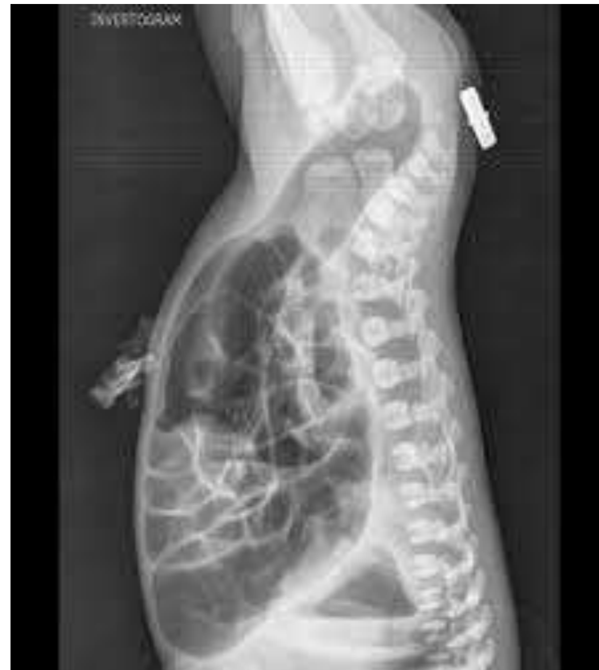
- Thorough perineal examination which will give clue to type of malformation.
- Wait for 16-18hrs for radiological evaluation.
- During waiting period intraluminal pressure will force the meconium through the rectum into the perineum in low type and fistulous tract in high type along with urine.
- During ist 24hrs, admit the patient in NICU for investigations , I/V fluids, antibiotics, rule out associated anomalies.

Radiological investigations

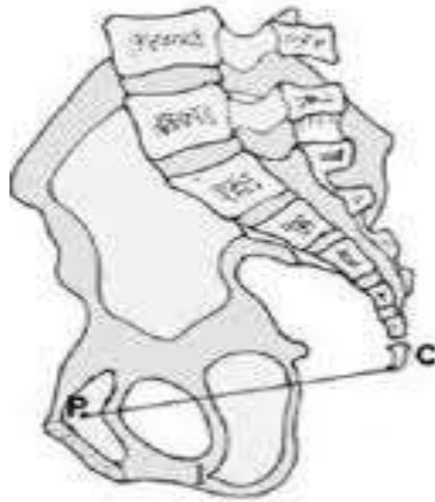
This is done after 16-18hrs if there is no meconium in perineum or along with urine.

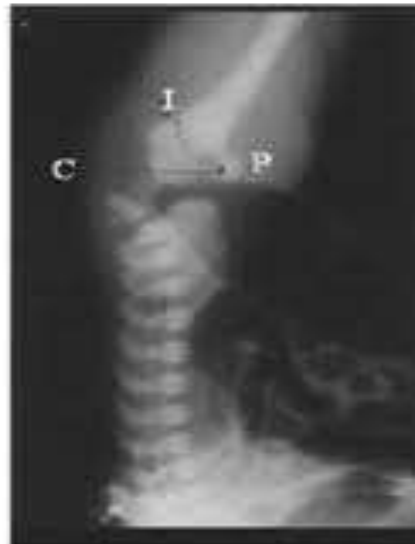
Invertogram/ cross table prone lateral film is done and different land marks are assessed.

diag



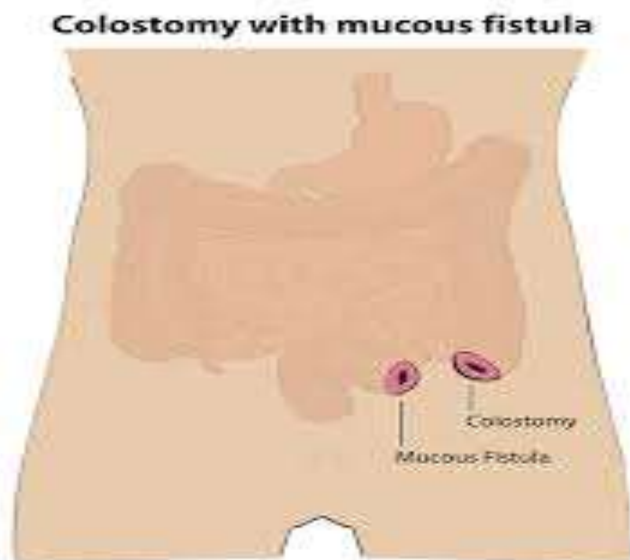
- Pubococcygeus line (PC)line- coccyx to symphysis pubis
- Ischiococcygeal line- between upper2/3rd and lower 1/3rd of ischium
- Between them is intermediate I part



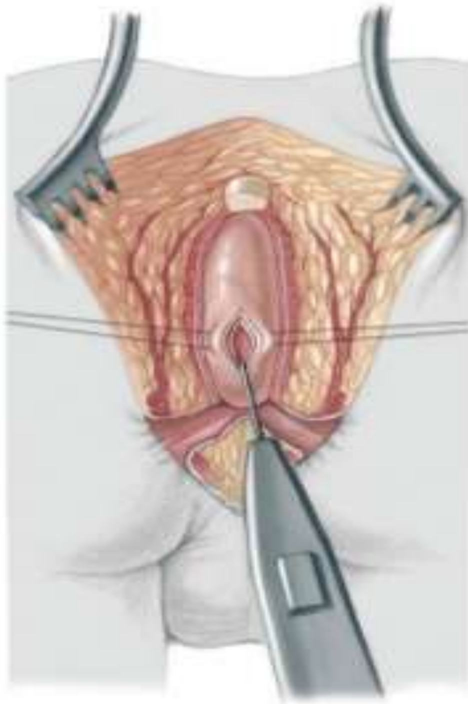


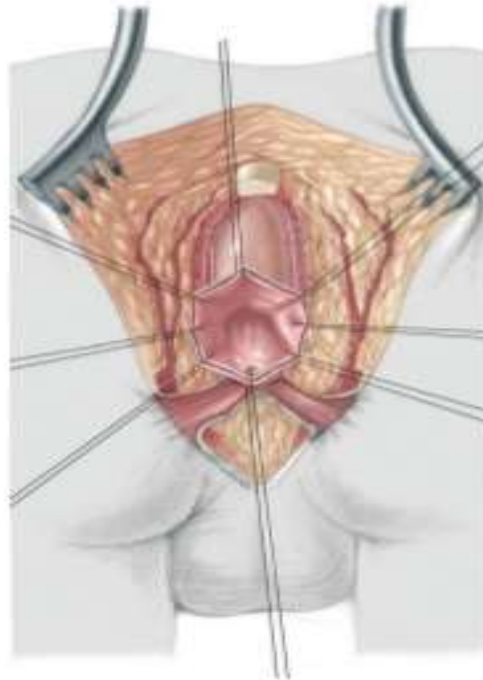
Management

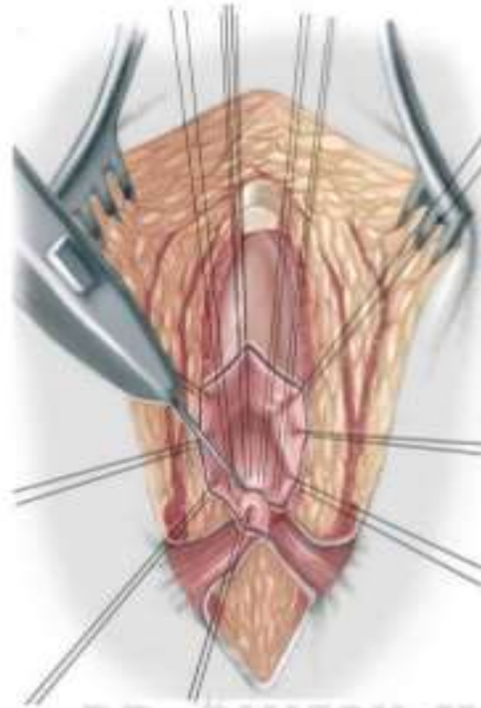
- In low type we do anoplasty
- In high type- diversion colostomy
- Types of colostomy- high divided sigmoid colostomy is done in 1st stage or loop sigmoid colostomy
- Posterior sagittal anorectoplasty (PSARP)



Posterior sagittal anorectoplasty (PSARP)







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THANKS