UMBILICAL HERNIA

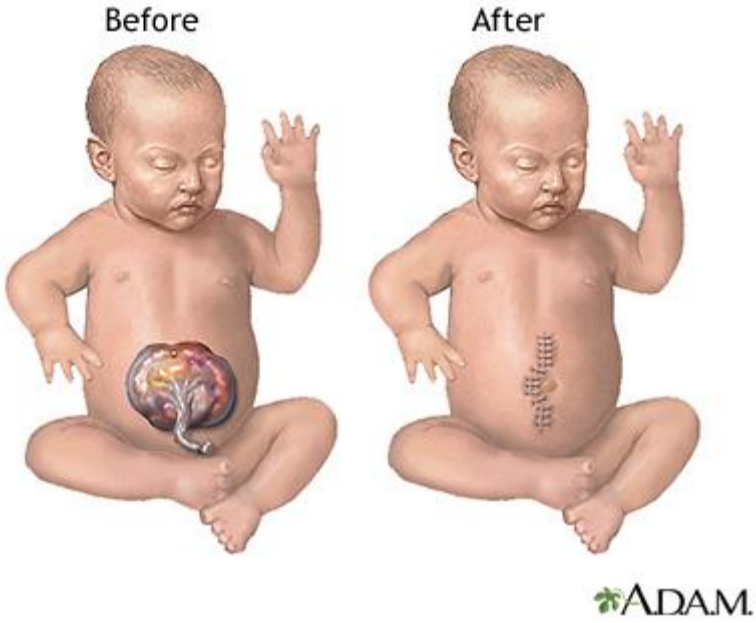
★ **Types:** ***Congenital, infantile and adult paraumbilical***

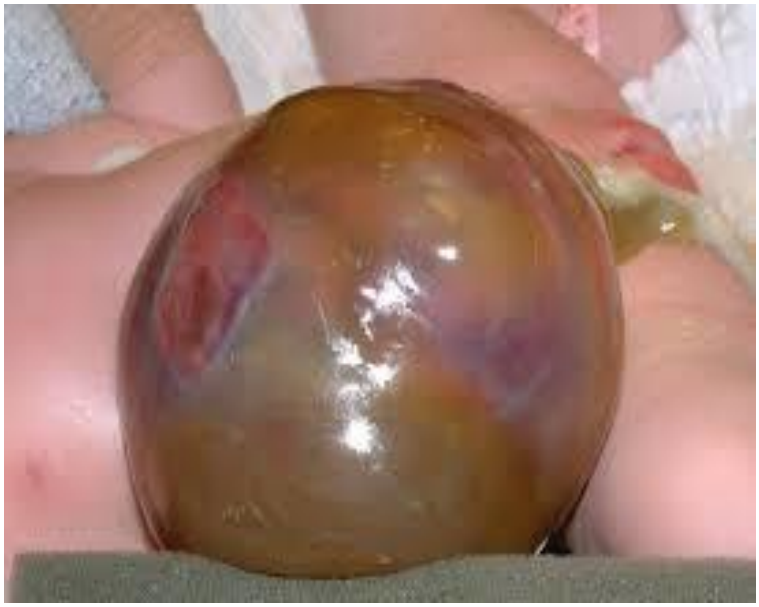
I. Congenital Umbilical Hernia

★ **Aetiology:** Failure of midgut to return to the abdomen during early fetal life.

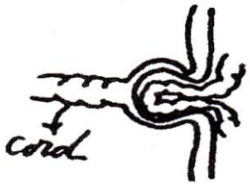
★ **Types:**

	★ *Exomphalos Minor* ★ **(Minor omphalocele)**	★ *Exomphalos Major* ★ **(Major omphalocele)**
*** Pathology:**		
1. Defect	♦ A small defect less than 5 cm at the base of umbilical cord .	♦ A large defect more than 5 cm, usually present above the umbilical cord .
2. *Sac.*	♦ A peritoneal sac protrude into the umbilical cord.	♦ A large wide necked sac.
3. *Content*	♦ Omentum , intestine or Meckel's diverticulum	♦ Many viscera & may contain part of liver.
4. Coverings	♦ Amniotic membrane & Wharton's jelly.	♦ Amniotic membrane .
*** Complications:**	♦ Injury of the contents during ligation of the cord.	♦ May be fatal due to: ➢ Rupture of the coverings →peritonitis. ➢ Respiratory complications .
*** Treatment:**	♦ Reduce the contents, excise the sac & primary repair of the defect.	♦ ICU & mechanical ventilator . ♦ IV fluids & nutrition . ♦ Cover the sac by synthetic mesh with gradual reduction of the contents , within few weeks , followed by closure of the abdominal wall .

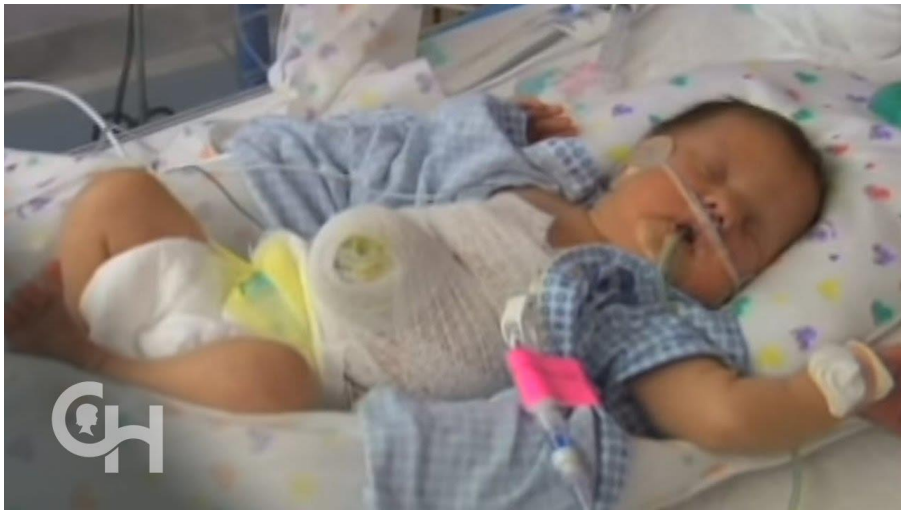




Exomphalos Minor ***Exomphalos Major***



★ *Examphalos major* ★ *Examphalos minor*



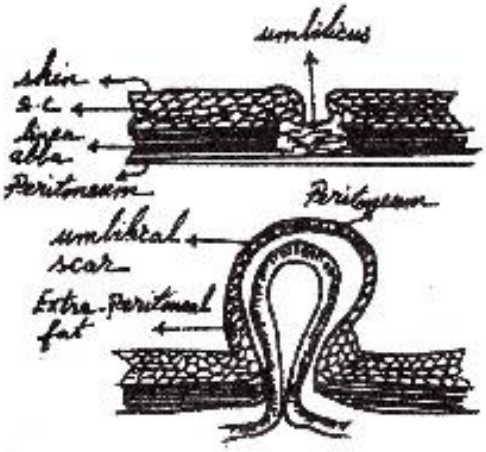
II. Infantile Umbilical Hernia

★ Aetiology:

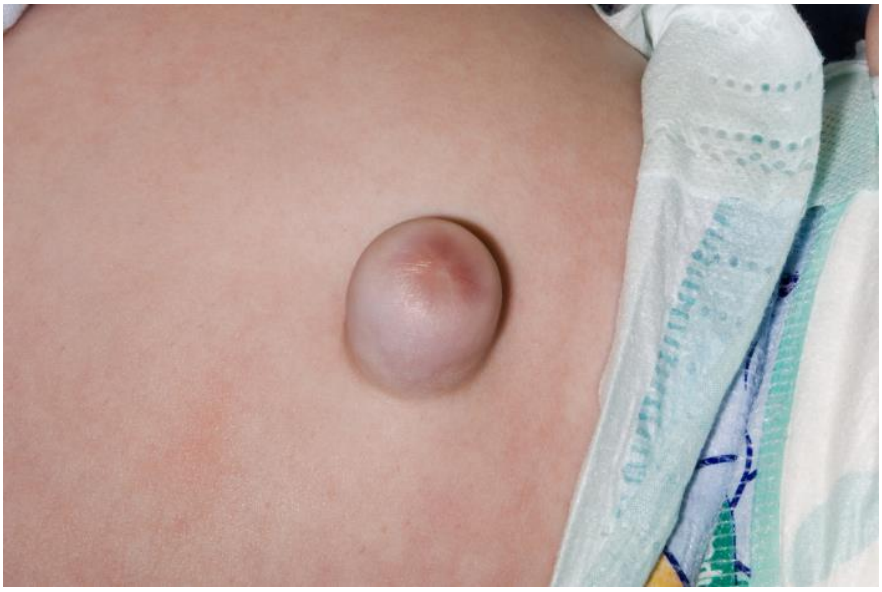
1. Weak umbilical scar due to infection.
2. Increased intra-abdominal pressure due to crying, or cough.

★ Pathology:

- ***Defect*** is exactly in the umbilicus. It is usually closed spontaneously before the age of 2 years.
- ***Sac :*** Wide neck → no complications and easy reducible.
- ***Coverings:*** Extraperitoneal fat and stretched umbilical scar.
- ***Contents:*** Intestine or omentum.



* Infantile Umbilical hernia ★



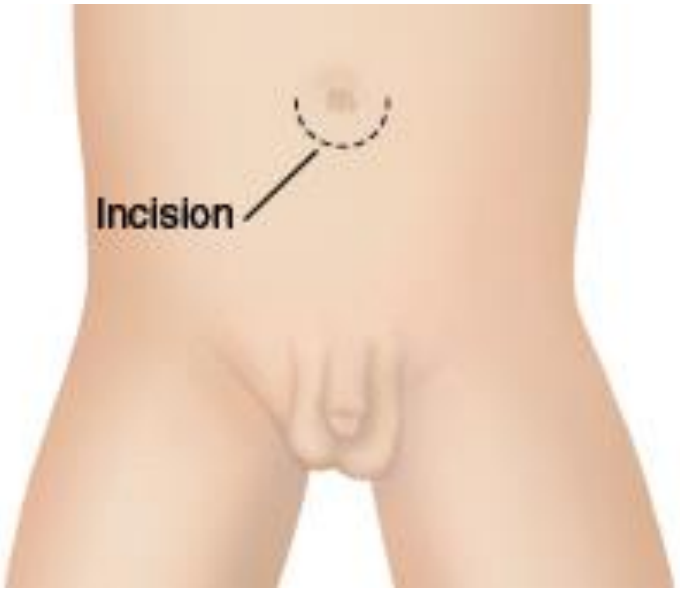
★ Clinical picture:

- Umbilical eversion *&* protrusion, increasing by coughing *&* crying.
- After reduction, the edge of the defect is felt as a firm ring.
- This type occasionally affect adults .

★ **Treatment:** Remove the **cause** of straining then one of the followings is done:

A. Reassurance of the parents , correct the cause of straining and follow up are the usual measure as the defect usually closes spontaneously within the first 2 years of life.

B. ***Surgical:*** Herniorrhaphy, If the defect is large (more than 2 fingers), above 2 years or complications occur. Through a semicircular incision below the umbilicus, the skin flap is undermined and the sac is transfixed *&* excised at the proper neck then the defect is closed by few prolene sutures.



III. Adult Paraumbilical Hernia

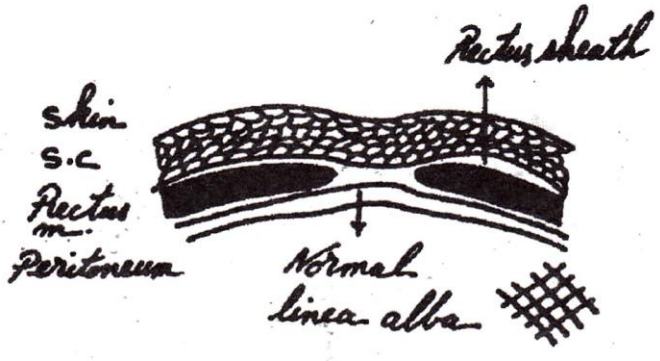
★ **Incidence:** Usually ***in fatty multiparous females***. It is the commonest hernia in the region of the umbilicus in adults.

★ **Aetiology:** Stretch and weakening of the linea alba by chronic increase of intra-abdominal pressure as repeated pregnancies, obesity & chronic straining , hepatosplenomegaly …etc.

★ **Pathology:**

1. The herrial sac protrudes through a defect in the linea alba usually above the umbilicus (rarely below the umbilicus & never below it) where the linea alba is broader, thiner & pierced by minute blood vessels.

2. ***The sac*** has a very narrow neck → complications are common → Adhesions inside the sac are common specially in the fundus → irreducibility is common.
3. ***Content:*** Usually omentum or intestine, rarely colon.
4. ***Coverings:*** Skin & S.C. fat.



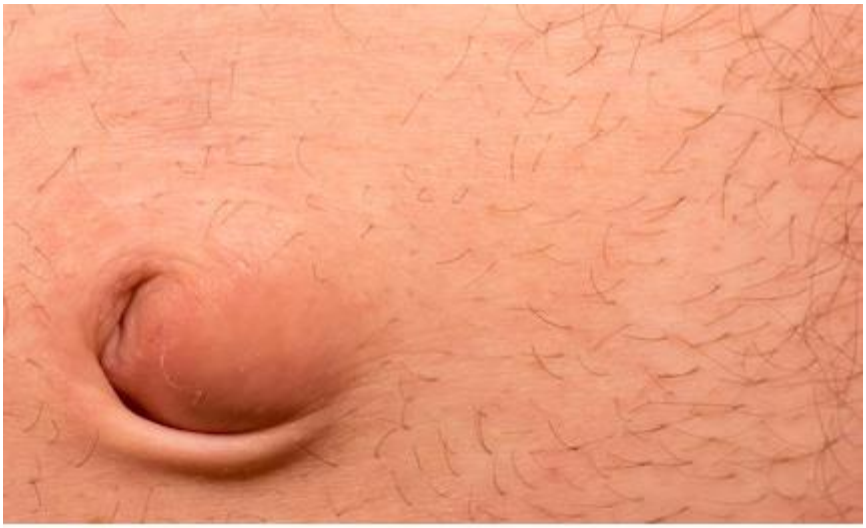
★ *Normal*

★ *Adult paraumbilical hernia*

★ **Complications and clinical picture:** (As general) +

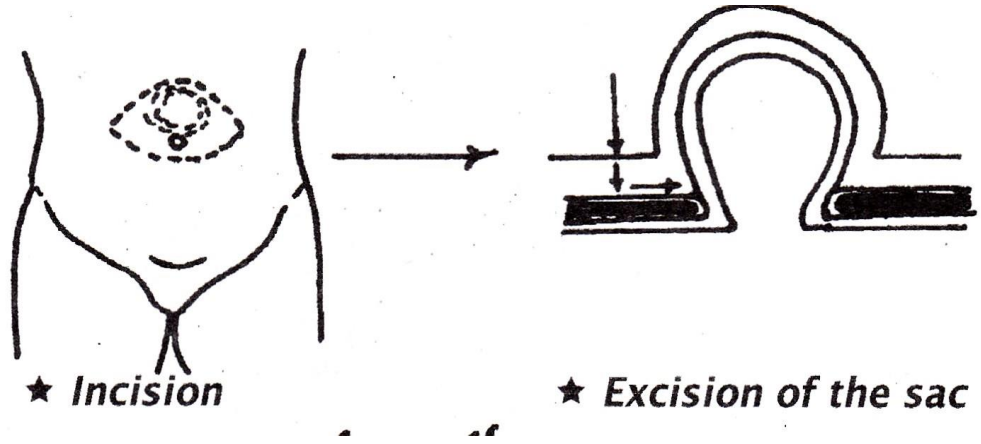
- Pain is common due to intestinal obstruction or dragging by large hernia.

- The upper part of the umbilicus is stretched over the lower part of the hernia → umbilicus is cresentic in shape.



★ **Treatment:** Truss is contraindicated *&* ***treatment is only surgical.***

- ***After elimination of any predisposing factor*** & reduction of weight the followings are done:
  - Through transverse ***elliptical incision*** over the maximum convexity of the hernia & skin flaps are undermined.



- ***The sac is excised*** at its proper neck after reduction of its contents.
- The ***defect*** in the linea alba is dealt with by one of the followings*:*
  - Small defect is closed by few prolene sutures
  - ***Hernioplasty by prolene mesh*** **f**or large defect, recurrent hernia or weak musculature .Nowadays , it is usually performed by **laparoscopic** approach or less commonly by open approach .