

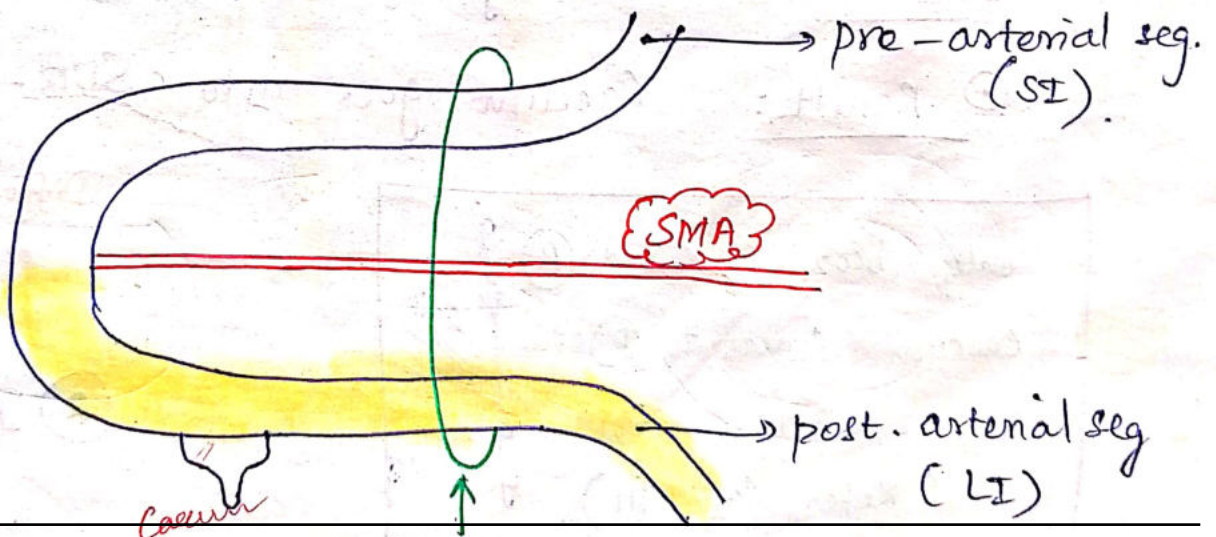
MIDGUT

(major duod. papilla to junc. of $R\frac{2}{3}rd$ & $L\frac{1}{2}rd$ of T.c).

WHY MIDGUT HERNIATES?

- ① Midgut has to form SI, LI so rate of growth of MA is fast.
- ② Liver @ 6th week is large so MA have v. little space

6th week $\Rightarrow$ PHYSIOLOGICAL HERNIA.



① 90° anticlockwise

② Site: Umb. opening.

③ Result: pre-arterial seg to (R) side
post " " " (L) side.

2nd (R):

① 90° anticlockwise

② site: Abd. cavity

③ Result: pre-arterial ^{seg.} is overlapped by
post arterial segment.

(Also pre-art. seg. is shifted to (L) side)

3rd (R):

① 90° anticlockwise.

② site: abd. cavity

③ Result: Caecum goes into SUB-HEPATIC. posⁿ.

only bcoz of 3rd (R)

caecum comes to (R) side

from midline posⁿ.

(Refer Case III).

Differential growth
of post abd. wall
↓

(R) Iliac fossa

2) Herniation → 6th wk.

Reduction of Hernia → 10th wk. ⊗

Total (R) = $90^\circ \times 3 = 270^\circ$ Anticlockwise

Abnormalities of Rotatⁿ of MA

Case I : NON ROTATION (although 1st (R) takes place)

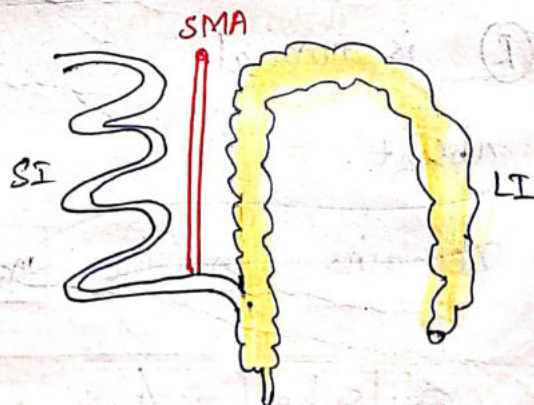
* 1st (R) is normal.

* II & IIIrd (R) is absent.

* So after Reducⁿ.

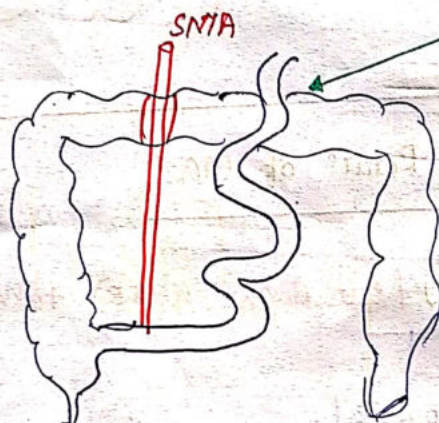
S.I is on (R) side.

L.I is on (L) side



abd. cavity before pre-arterial seg.

* So Transv. colon is overlapped by
SI & SMA



Note: Even compression

& obstruction of
Transv. colon is
due to SMA mainly,

Case III

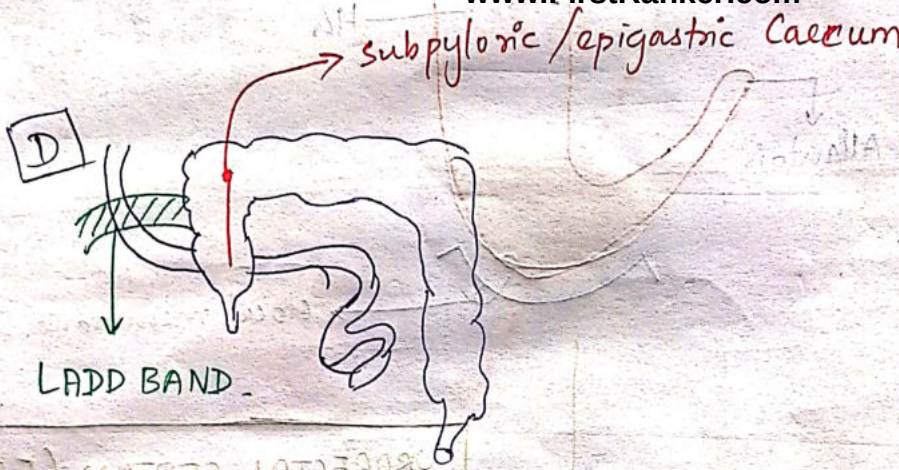
Malrotation (Subpyloric Caecum/ Epigastric Caecum)

* 1st & 2nd (R) is normal.

* 3rd (R) is absent.

* So Caecum remains in the midline

Here, Caecum is subpyloric/Epigastric caecum



Case IV

Omphalocele.



⊙ failure of REDUCTION of physio. Hernia.

⊙ Usually seen with multiple anomalies, That's why Mortality rate is HIGH.

midgut loop

⊙ covered with amniotic membrane

Case V

Gastrochisis.



⊙ Reherniation of MG again due to DEFECT in Ant. abd. wall



⊙ Bcoz of "INCOMPLETE" lat. folding of embryo.

⊙ Gut loops are not covered with any membrane bcoz of ventral body wall defect