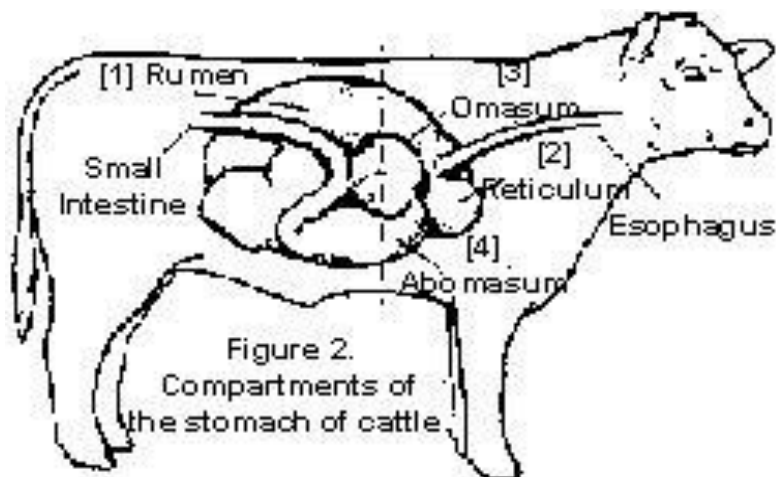
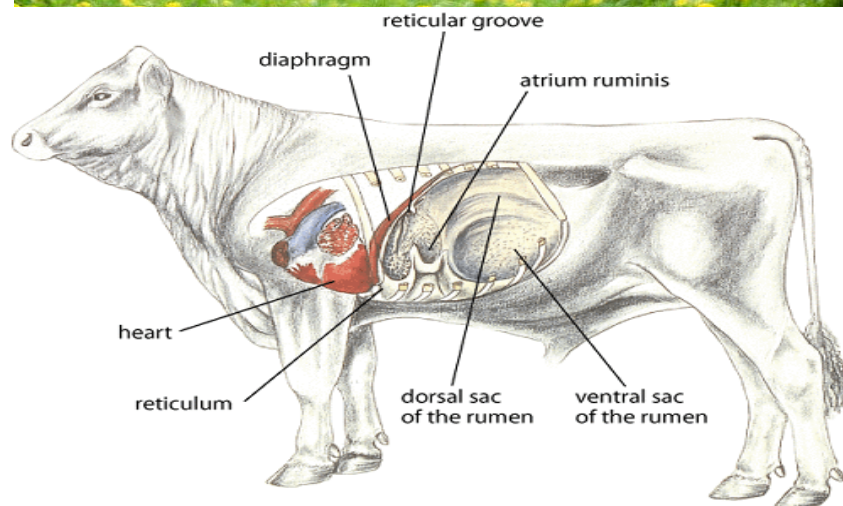


Rumen in ruminants:

Have four compartments

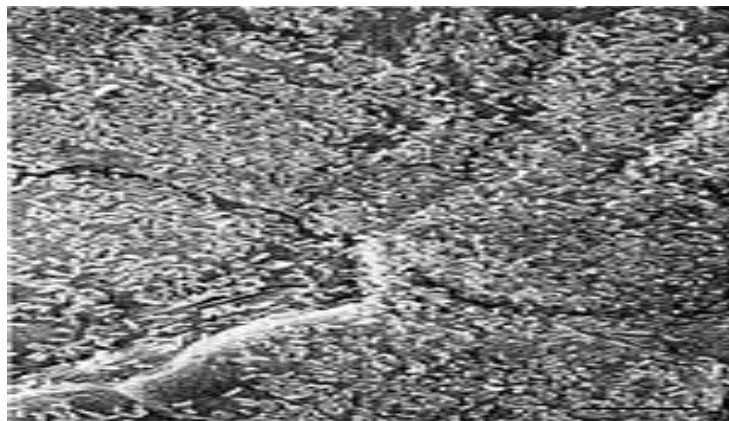
1. Rumen.
2. Reticulum.
3. Omasum.
4. abomasum.



Rumenotomy

An operation done in the rumnant stomach, by induced incision in the rumen for the following purpose (indication):

- Remove the metallic foreign bodies, which cause traumatic reticulitis, or traumatic reticulo peritonitis.
- Remove the materials that obstructing the reticulo- omasal orifice.
- Remove the foreign bodies which lodged in the distal esophagus or over the base of the heart.
- Evaluation of the rumen content, in rumen over load.
- Rumenal impaction with atony of the omasum or abomasums.
- Remove the Ingested fetal membrane with toxic symptoms.
- For the diagnostic purpose
- For the Experimental studies and searching methods

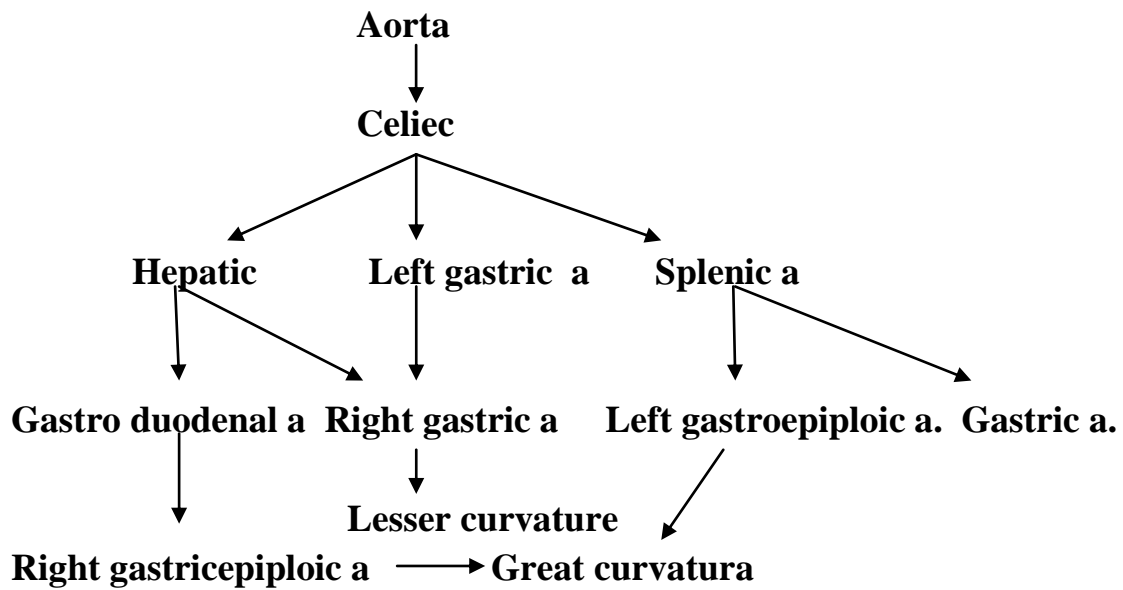


The rumen

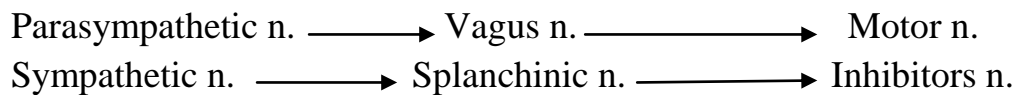


The reticulum

Blood and nerve supply: same as in simple stomach



Nerve supply:



Preoperative preparation:

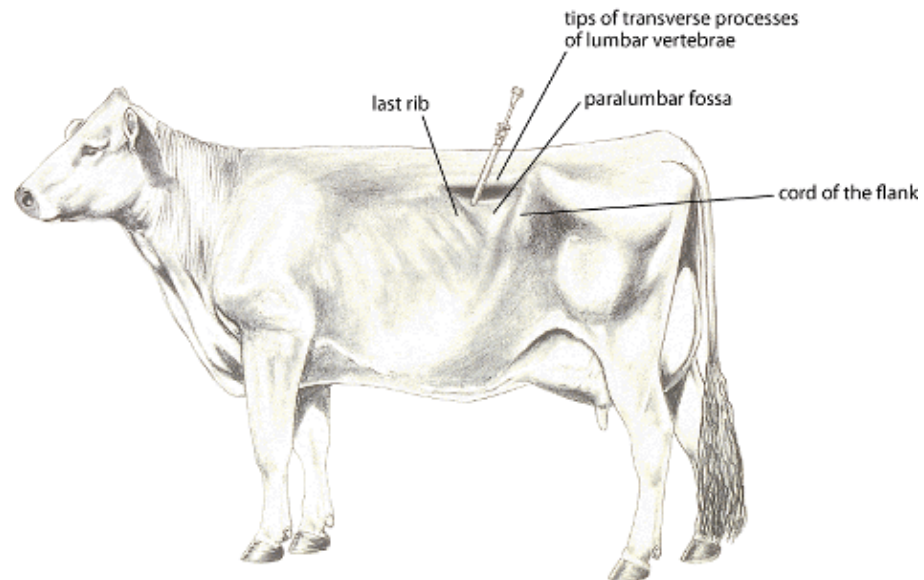
- Lab examination
- off food 24 hours and water 6 hours prior to operation
- Prepare the left flank, by Clipping ,shaving, washing with water and soap, then disinfect the site by covering the site of incision with cotton imbedded with 70% alcohol solution,then scrape the area with tincture iodine 2% .until the surgical teams prepare them self .
- Desensitized the area (lidocaine hydrochloride 2% at dose of 1cm³ for each cm²).
- Using sterile drapes to cover the animal except the site of operation .

Anesthesia:

- Calm the animal if necessary using xylazine 0.25mg / kg.B.W,or acepromazine.
- Local anesthesia by local infiltration either line block, circular or inverted L block ,using lidocaine hydrochloride 2%
- Or by para lumbar vertebral block, the 13th thoracic n. (last rib) and the 1st and 2nd and may be the 3rd lumbar nerve using lidocaine hydrochloride 2% .

Site of operation:

Performed In the standing position, or can be done in the recumbent position, 3 to 4 finger after the last rib, and 3 to 4 finger below the transverse process of the lumbar vertebra from the left side ,at the lumber fossa.



Surgical technique:

- Skin incision about 20 cm lengths at the left Para lumber region,(sharp dissecting of the skin and sub cutaneous tissues).
- Dissect the under laying tissues, **external** abdominal oblique, **internal** abdominal **oblique**, and transverse muscles (bluntly or sharply dissecting).
- opening the peritoneal sheath.
- exploration of the peritoneal cavity
- Using either the **wringer** technique, or **Goetz** technique or the **rubber** sleeve technique
- **Goetz** technique, by suturing the rumen to the skin prior to rumenotomy, by continues inverting suture pattern.
- Incised the rumen (using the less blood circulation area).
- Evacuate and explore the rumen from foreign bodies or abscess.
- Examine the reticulum and swept it with a magnet to pick up additional metallic debris.
- Fresh ruminal content (if available) placed in the rumen.
- Insert alkalizing products in case of rumen over load.

- Mineral oil may be instilled when indicated.
- Change the gloves (discarded the first gloves).
- Close the rumen incision with continuous inverting suture using no.2 or 3 chromic catgut (the first row is taking all the layer by **shmedin or conell** technique ,while the second row only take the serosa and muscular layer by **cushing or lembert technique**) .
- Irrigate the surgical site with warm and sterile normal saline or diluted povidine iodine solution.
- The peritoneum and the underlying muscles closed with simple continuous pattern using no.2 or 3 absorbable suture materials.
- Close the skin by simple interrupted pattern using no.2 or 3 non absorbable suture materials.
- Using dressing bandage to protect the site of operation.
- Remove all the drapes and surgical instruments

Post operative management:

- Daily check the site of operation
- Post operative medication
- Fluid therapy
- Systemic Antibiotics
- Oral fluid can be administered following rumenotomy
- Mild osmotic laxative (magnesium hydroxide) to promote gut motility.
- Check the nutrition and the space around (reduce the diet several days post operation).
- Remove the suture materials at 7 to 10 days post operation

The complication:

- Adhesion
- Peritonitis
- Sub cutaneous emphysema
- Hemorrhage
- Abscess.