



# RUMENOTOMY

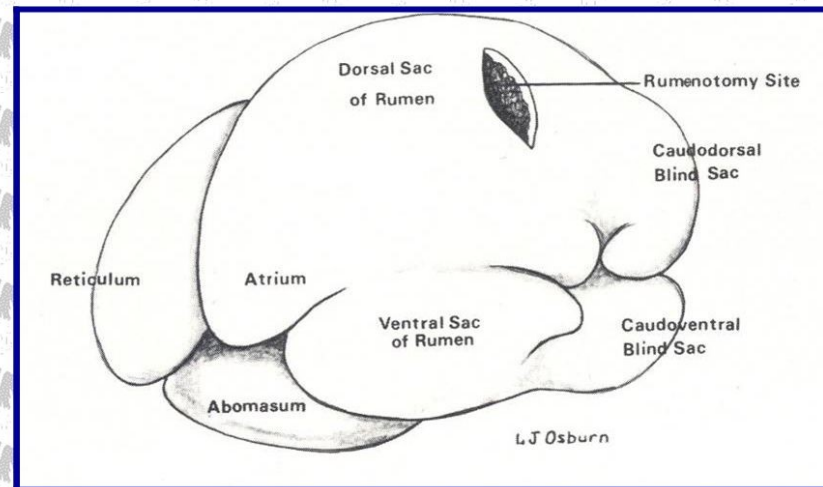
VSR-609 LARGE ANIMAL SOFT TISSUE SURGERY

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# RUMINOTOMY IN LARGE ANIMAL

## Rumenotomy

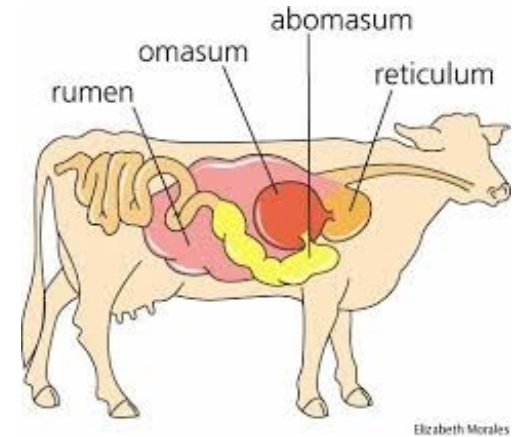


**SUBMITTED TO:-  
DR. RAMESH TIWARY**

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# Rumen anatomy & Physiology

- ❖ Placed :- 8<sup>th</sup> rib to the pelvic inlet.
- ❖ It occupies most part of the left half & a small part of right half of the abdominal cavity.
- ❖ Turkish towel appearance.
- ❖ Epithelium- Keratinized stratified squamous epithelium.



# Development of papillae in rumen



**Figure 1: The rumen of a calf fed milk only shows little papillae development.**



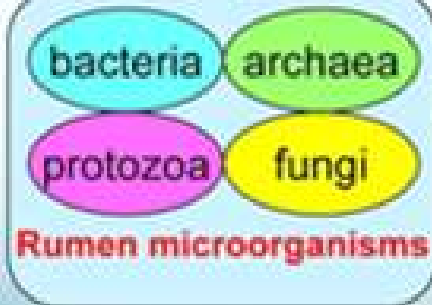
**Figure 2: The rumen of a calf fed milk and hay shows little papillae development.**



**Figure 3: The rumen of a calf fed milk and grain shows significant papillae development.**

# Rumen Physiology

## The role of rumen microorganisms



### The role of rumen microorganisms

- Fiber degradation
- Production of proteins
- Production of VFAs
- Breakdown of nutrients
- Methane production

# INDICATION

1. Traumatic reticulitis
2. Hair balls & other foreign bodies in the rumen & reticulum.
3. Repair of reticular hernia.
4. Persistent rumen impaction.
5. Frothy bloat.

# Anesthesia during rumenotomy

## Local anesthesia.

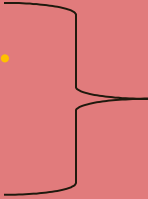
### A. Infiltration anesthesia.

a) Line block.

b) Inverted L block.

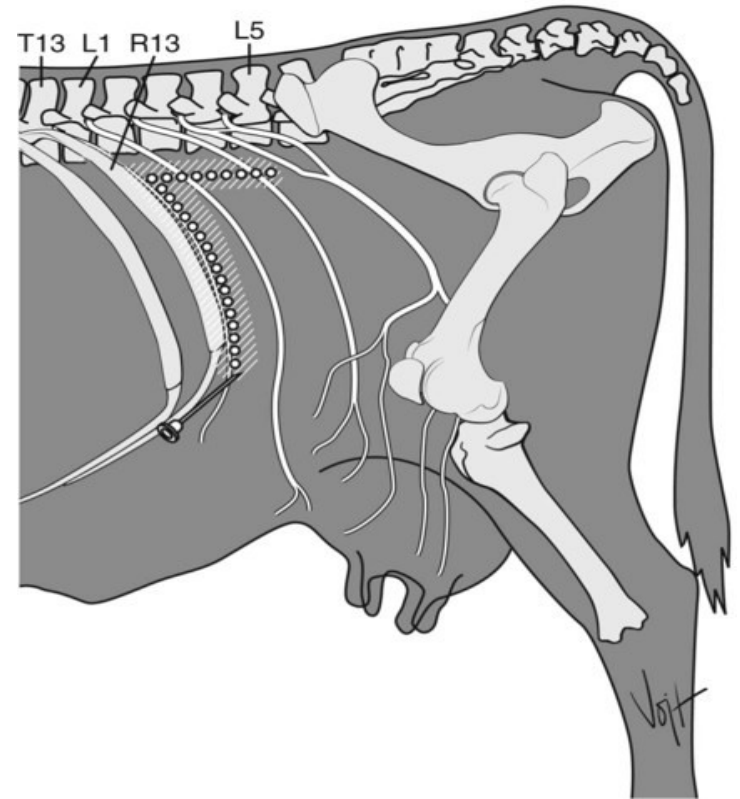
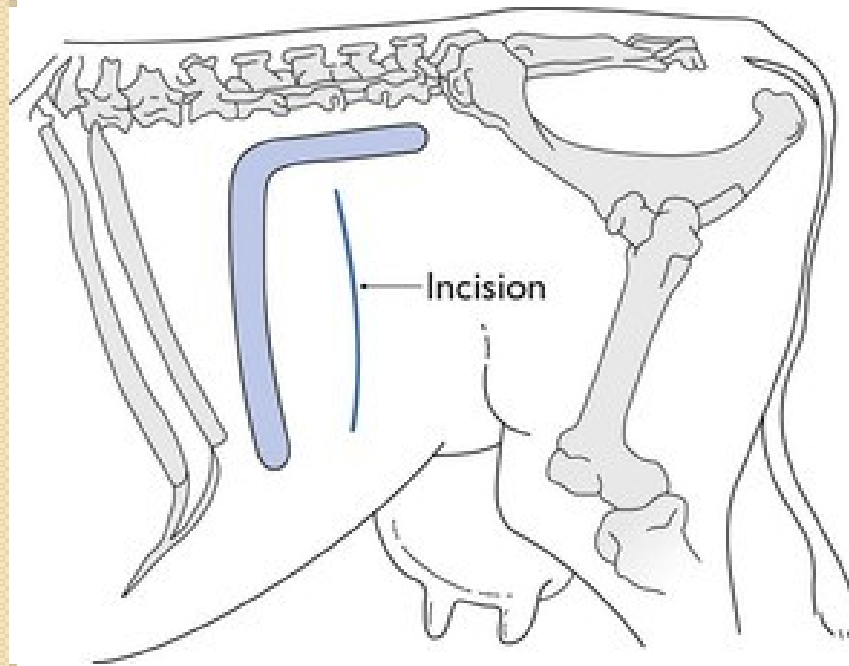
### B. Proximal paravertebral anesthesia.

### C. Distal paravertebral anesthesia.



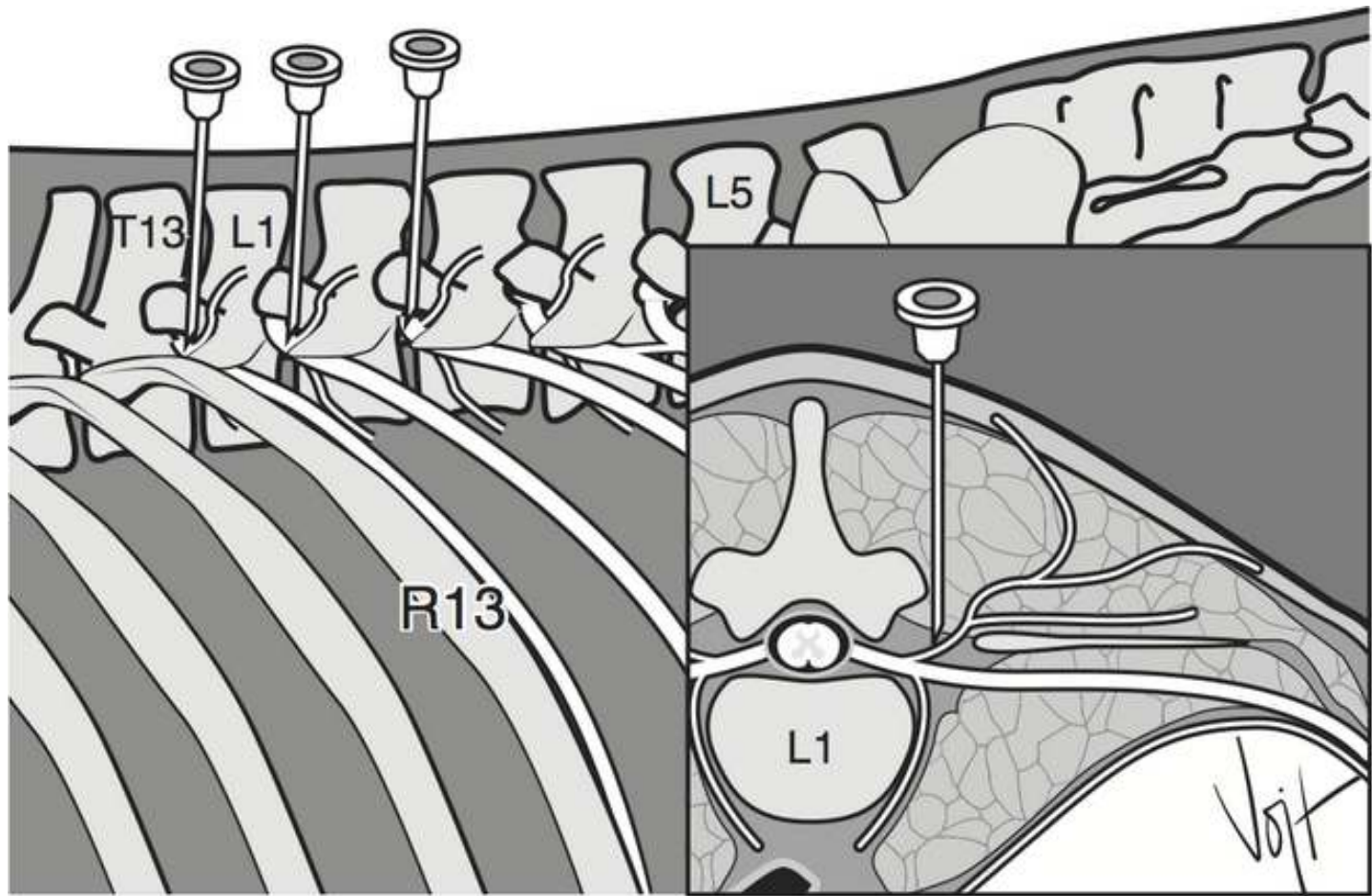
T13,L1  
&L2



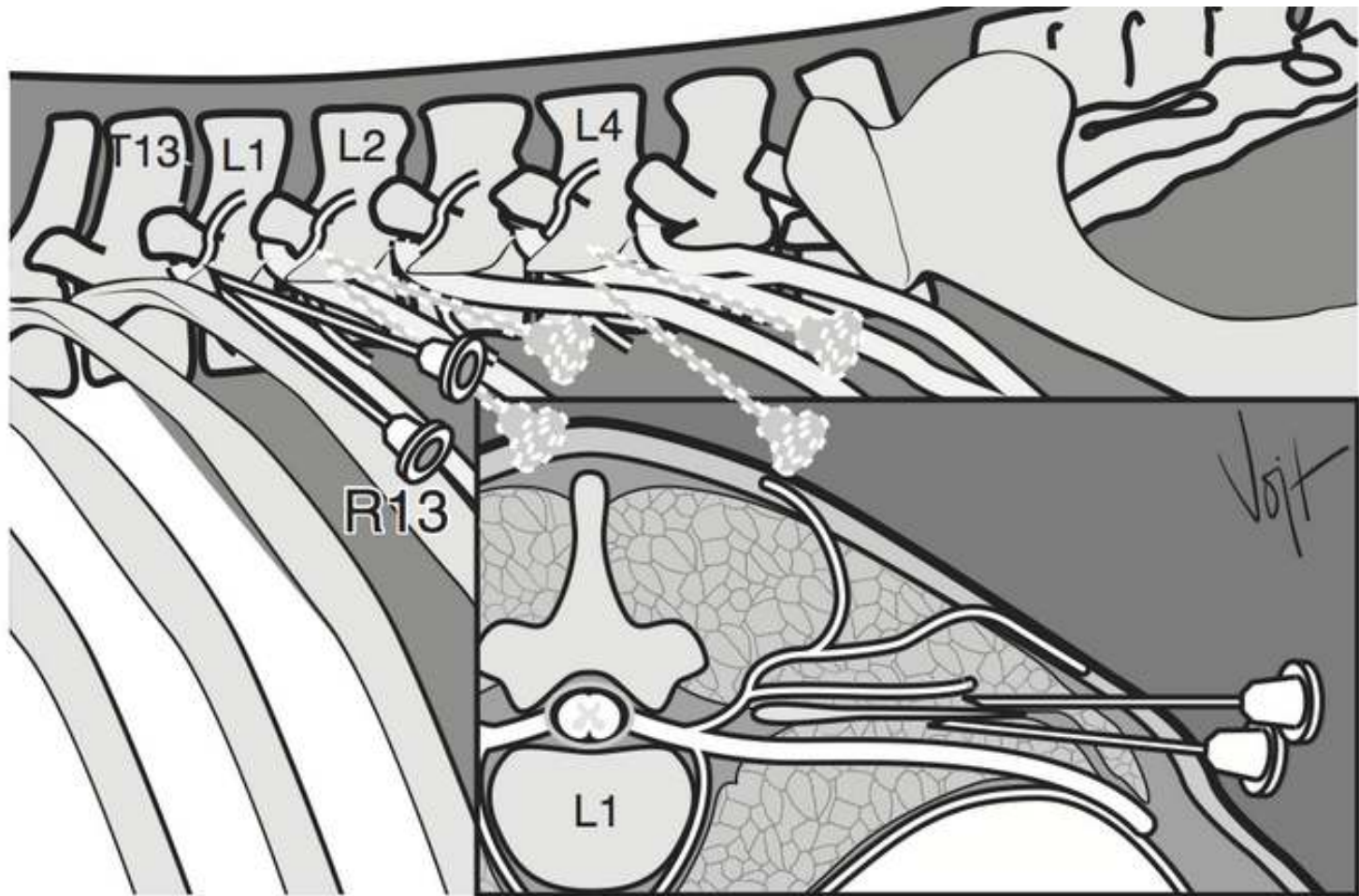


Regional anesthesia of the cattle left flank using inverted L infiltration pattern.





**Proximal Paravertebral Nerve Block . Needle are placed just cranially to the transverse processes about 2.5 cm from midline.**



**Distal Paravertebral Nerve Block . Needle placed just above & below L1,L2 & L4 transverse processes & lidocaine is infiltrated in a fan pattern.**

# Clinical finding

- Dull & depression.
- Anorexia.
- Slow rumination or atony.
- Drepressed rumen motility.  
( Both frequency & amplitude- impaction)
- Grinding of teeth .
- Sternal recumbency.
- Enlargement of abdomen.
- Tympanic or drum like sound on percussion of left par lumber fossa. Crepitating sound may be heard on palpation.
- colic
- Ruminal stasis (Constipation ).
- Abducted elbow.

# Diagnosis

- History.
- Use of metal detector.
- Pole test.
- Change ph of the ruminal fluid.
- Blood test.
- Abdominocentesis.
- Lateral plain radiograph.
- Ultrasonography

# Surgical method

❖ Rumenotomy is done left flank incision .

❖ Surgical site-

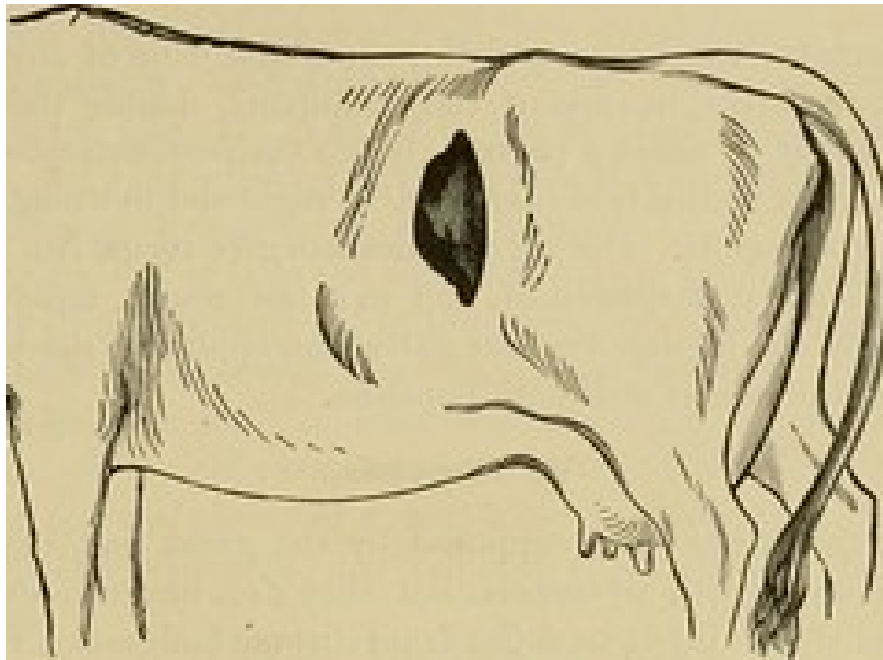
Incision 3 to 5 cm caudal & parallel to the last rib.

Incision length should be 20 to 25 cm.

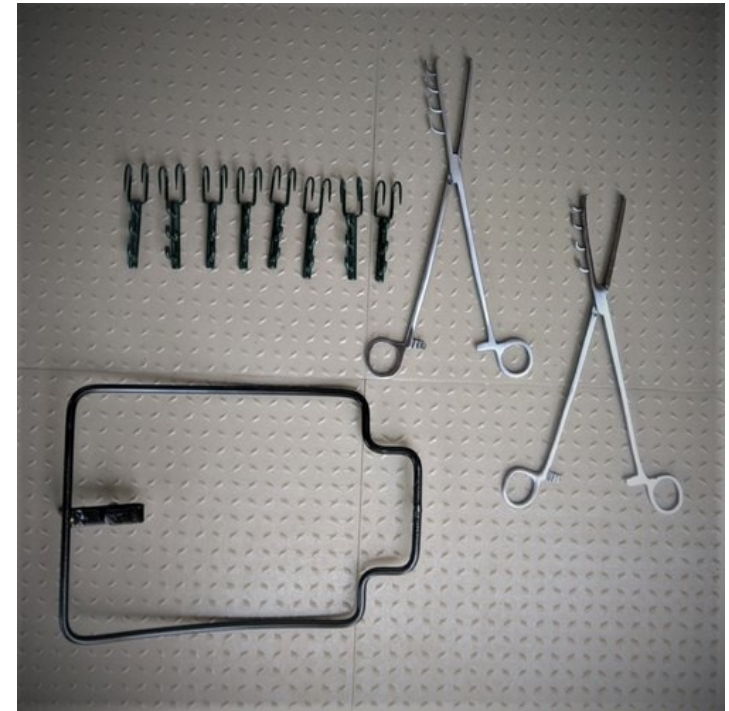
Skin – subcutaneous tissues – external & internal obliques muscle – transverses muscle – peritoneum are incised in the same plane.

The rumenotomy site is in the dorsal sac of the rumen using both techniques .

( weingarh frame method & Mclintock cuff method )

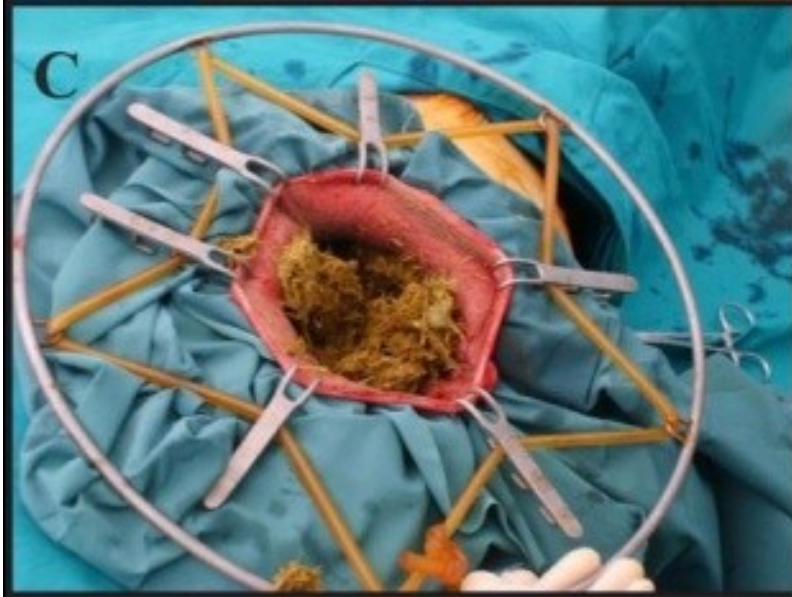
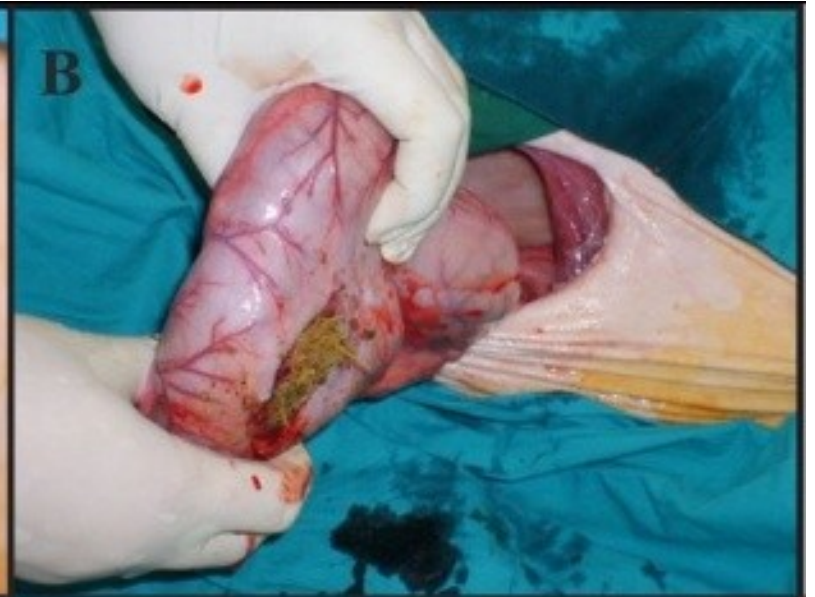
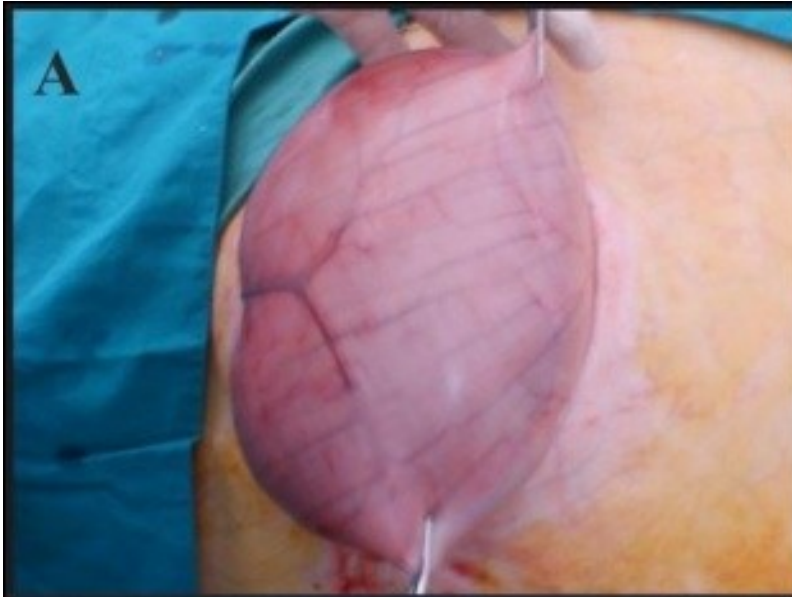


Incision site



Rumenotomy instruments









Rumenotomy closure

## Precaution :-

To avoid potential contamination of the abdominal cavity by ruminal contents , the ruminal lumen is either exteriorised ( Weingart fram or McLintock cuff) or abdominal cavity is sealed off from the rumen by temporary insertion of a continuous suture




# Rumenotomy closure

The rumen is suture with :-

- Continuous lambert inversion suture .  
Continuous cushing inversion suture  
( catgut No. – 5 , vicryl )
- Usually a single layer of simple continuous suture for peritoneum and muscles edges. An additional layer of simple continuous suture can be used to reinforce the first layer.  
( catgut No.- 3 , vicryl )
- Skin- simple interrupted sutures  
(silk , No. – 1 )

# Post -operative management

- Fluid therapy.
- Antibiotic.
- NSAIDs .
- Regular dressing of wound.
- Mild osmotic laxatives ex- magnesium hydroxide  
  
promote gut motility.

# Complication

- Lack of improvement.
- Peritonitis.
- Incisional infection.

A white, hand-drawn style thought bubble sticker is pinned to a corkboard. The sticker has a soft, irregular shape with a small tail at the bottom. Inside the bubble, the words "Thank you!!" are written in a bold, black, sans-serif font. The background of the corkboard is a textured, light brown color.

**Thank  
you!!**