



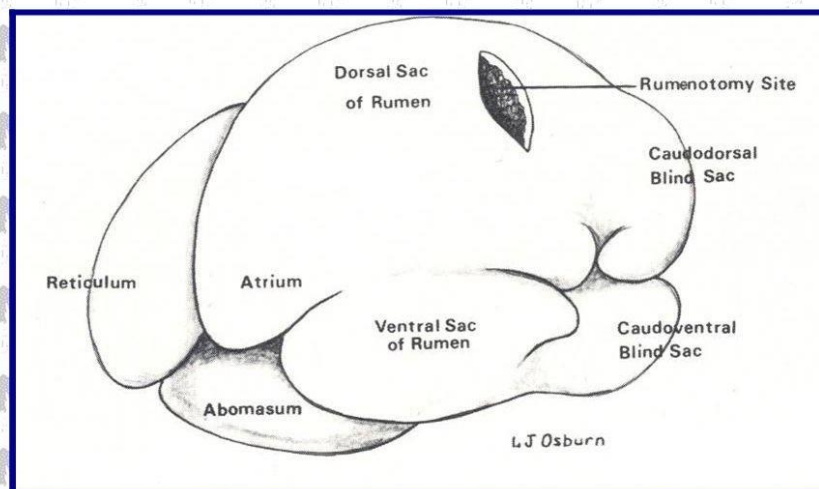
**MJF College of Veterinary  
&  
Animal Sciences, Jaipur.**

# **RUMENOTOMY**

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MJFCVAS, CHOMU**

# RUMINOTOMY IN LARGE ANIMAL

## Rumenotomy

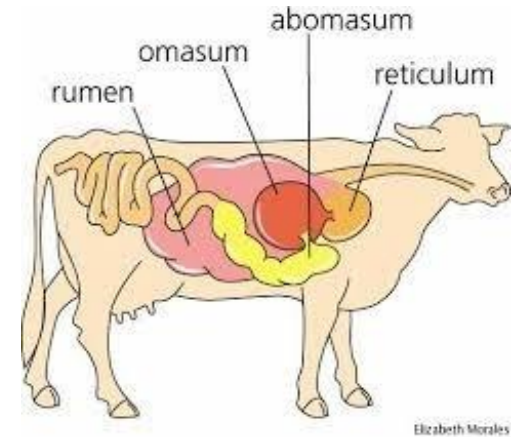


**SUBMITTED TO:-**  
**Dr. Kuldeep Sir**

**SUBMITTED BY:-**  
**Ajit Singh**

# 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.**



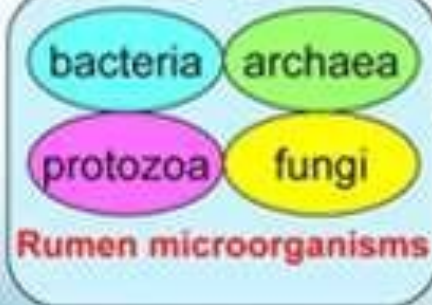
**Figure 2: The rumen of a calf fed milk and hay shows little papillae development.**



**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.

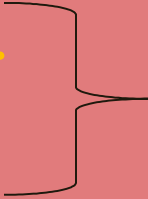
### A. Infiltration anesthesia.

a) Line block.

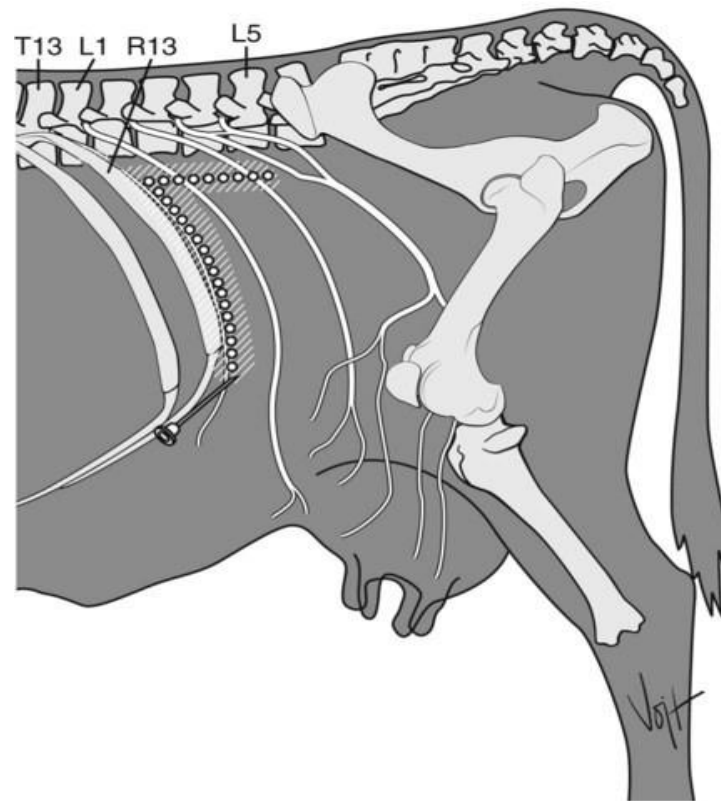
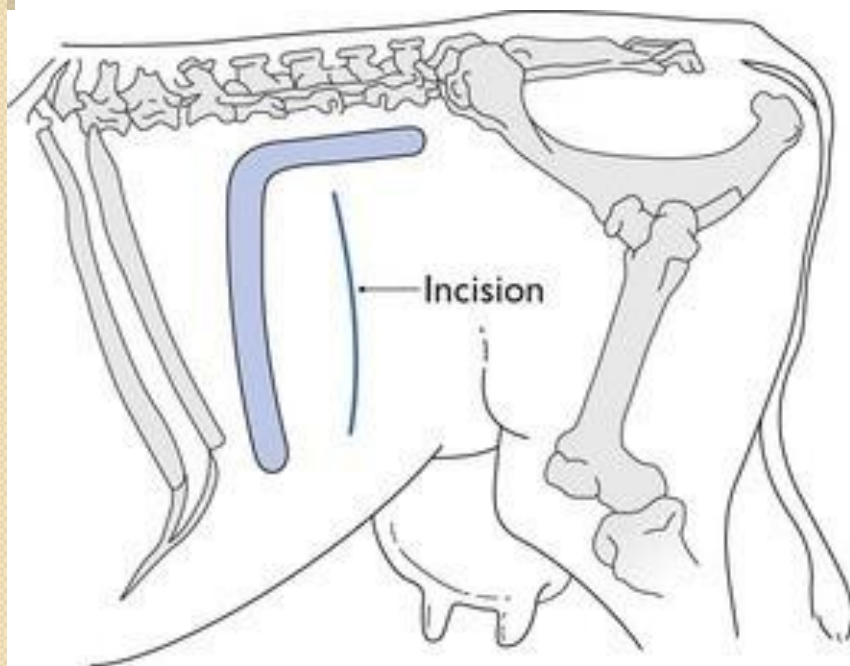
b) Inverted L block.

### B. Proximal paravertebral anesthesia.

### C. Distal paravertebral anesthesia.

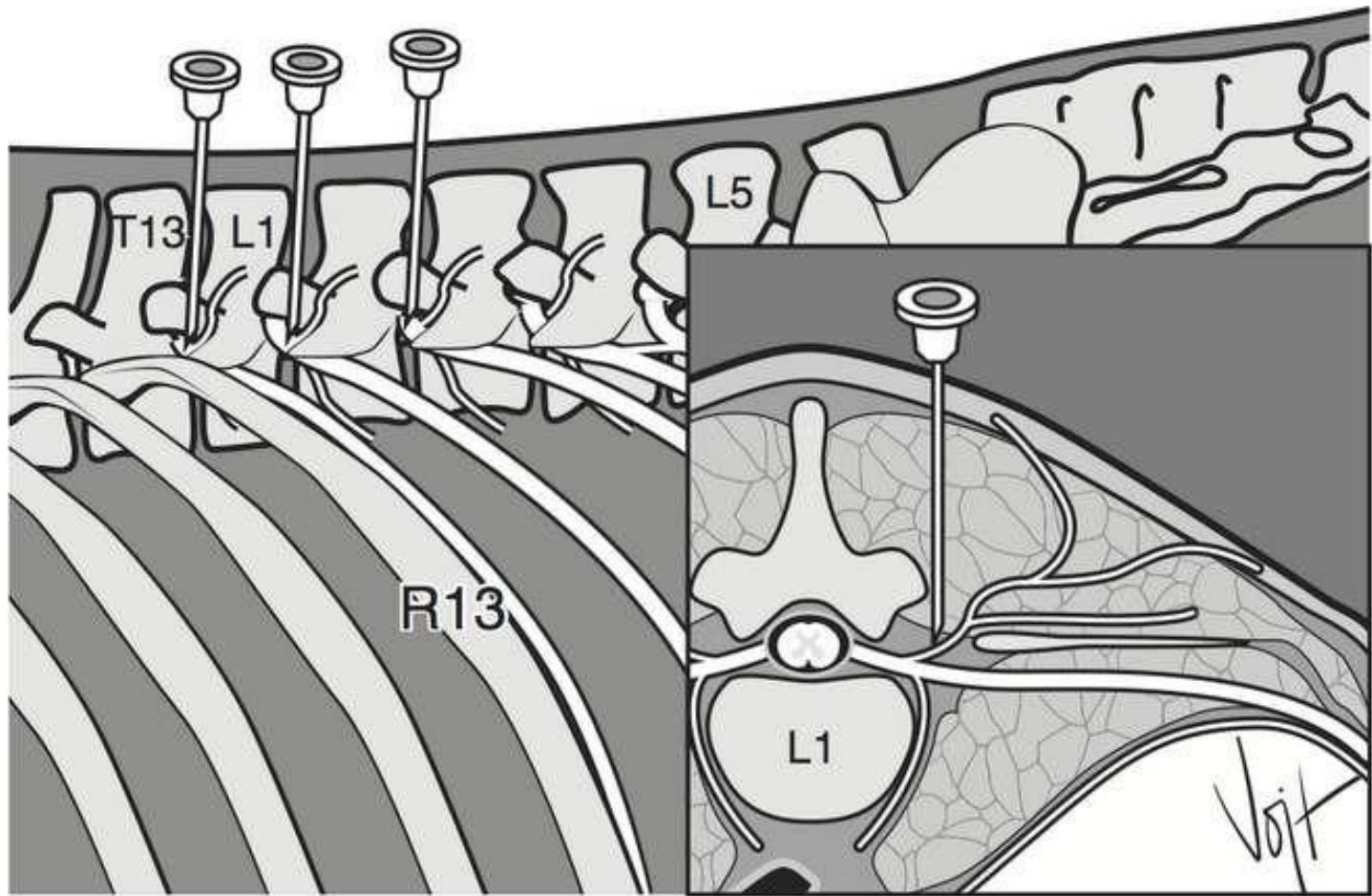


T13,L1  
&L2

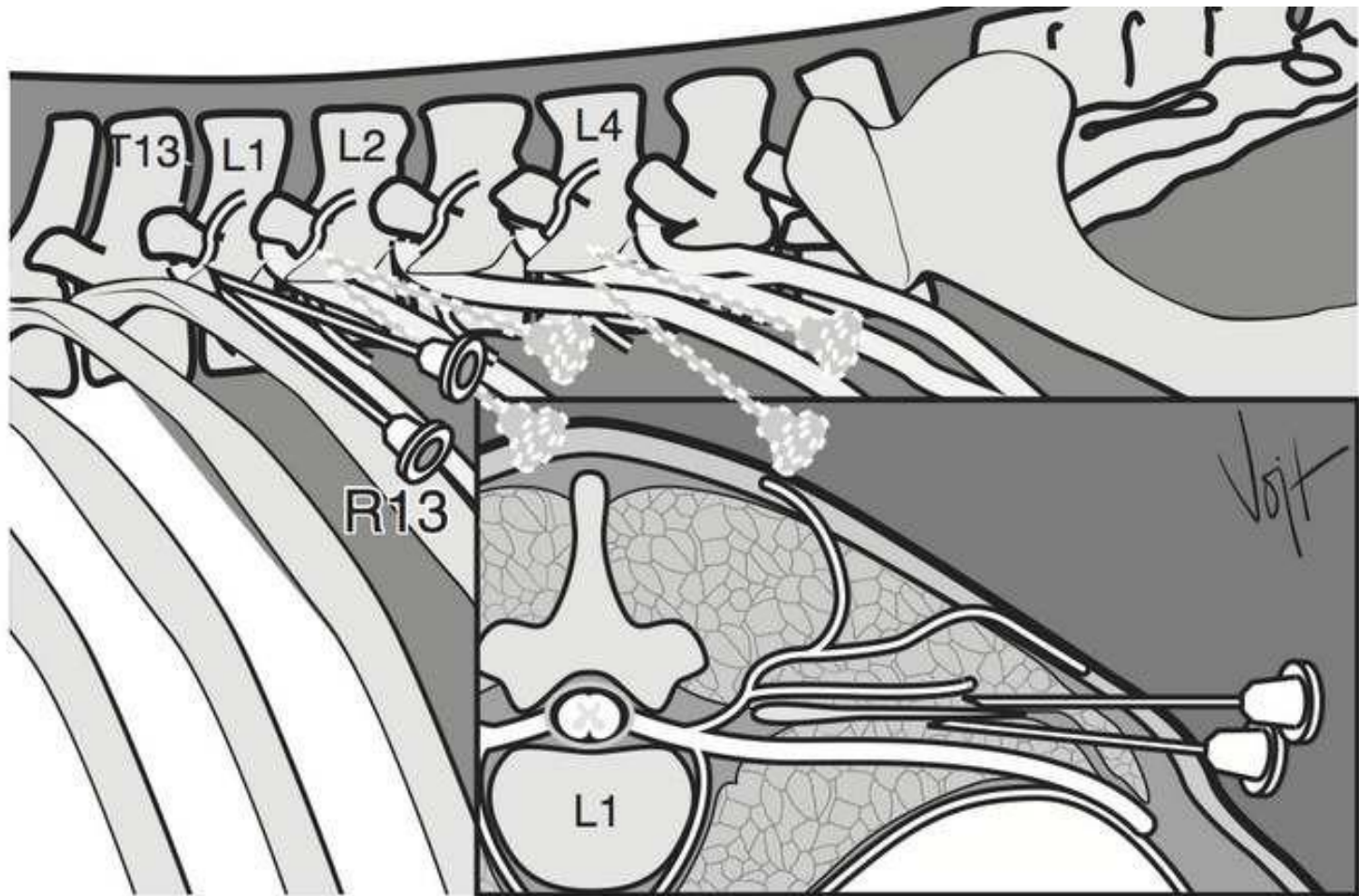


Regional anesthesia of the cattle left flank using inverted L infiltration pattern.





**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-**

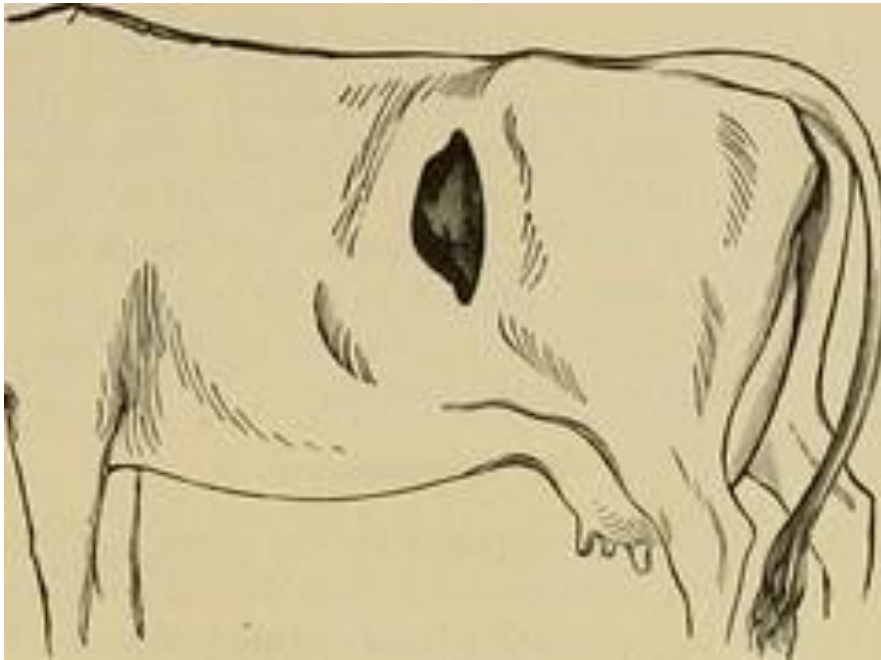
Incision 3 to 5 cm caudal & parallel to the last rib.

Incision length should be 20 to 25 cm.

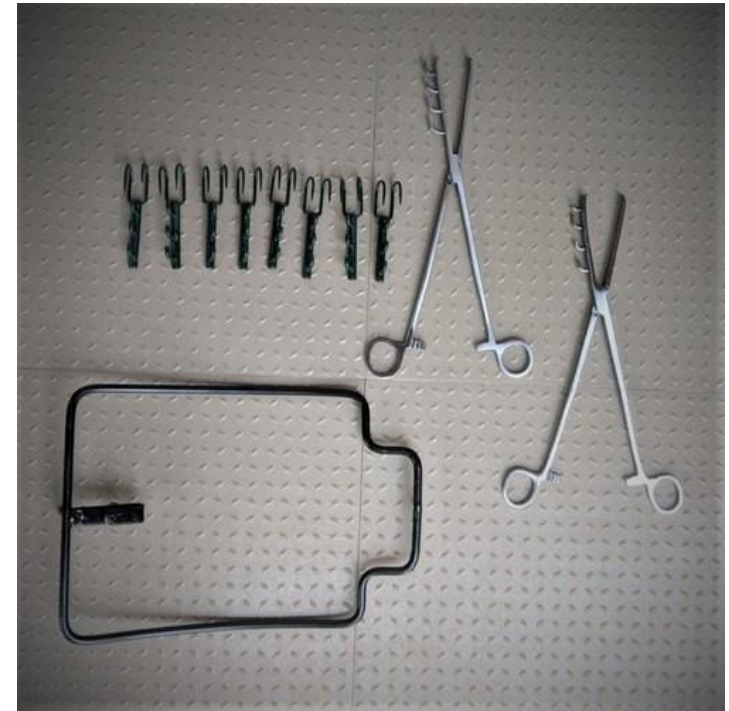
**Skin – subcutaneous tissues – external & internal obliques muscle – transverses muscle – peritoneum are incised in the same plane.**

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

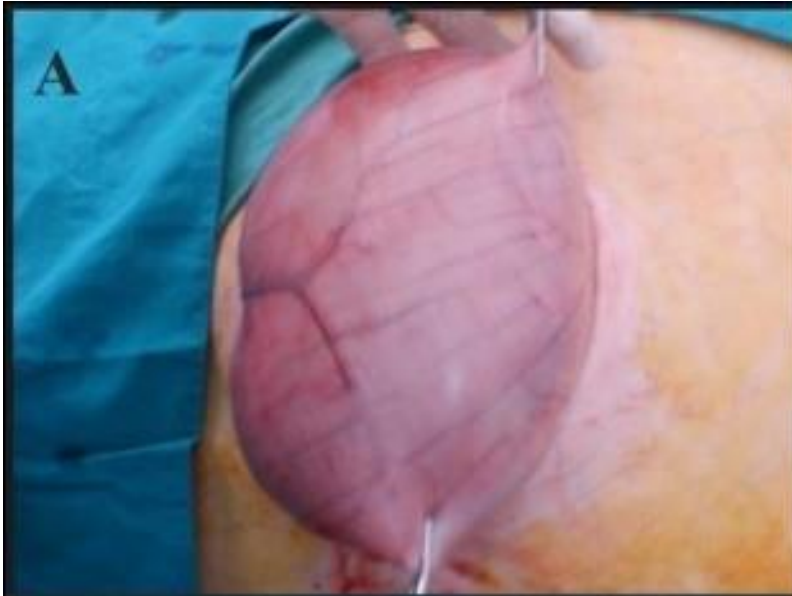
( weingarh frame method & Mclintock cuff method )



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, cloud-shaped sticker with a small tail at the bottom, containing the text "Thank you!!" in a black, handwritten-style font. The sticker is placed on a brown corkboard background.

Thank  
you!!