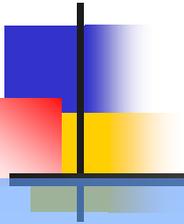


Affection of Large Intestine



Prof.

Ibrahim MH Alrashid

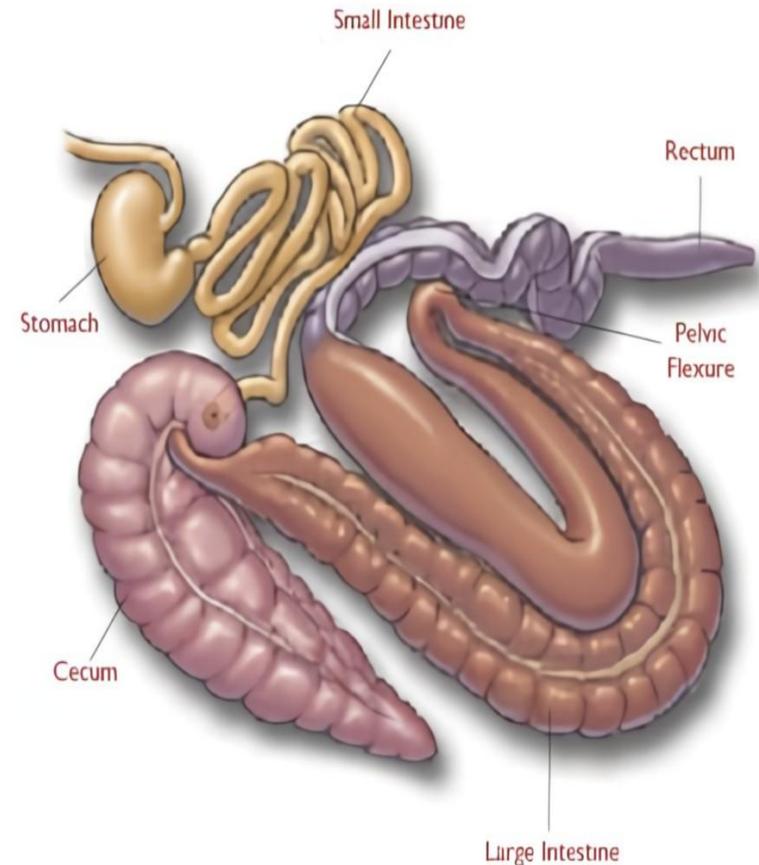


Introduction

- The large intestine is the portion of the digestive system most responsible for absorption of water from the indigestible residue of food. The *ileocecal valve* of the ileum (small intestine) passes material into the large intestine at the cecum.
- Water is absorbed here and the remaining waste material is stored in the *rectum* as *feces* before being removed by *defecation*

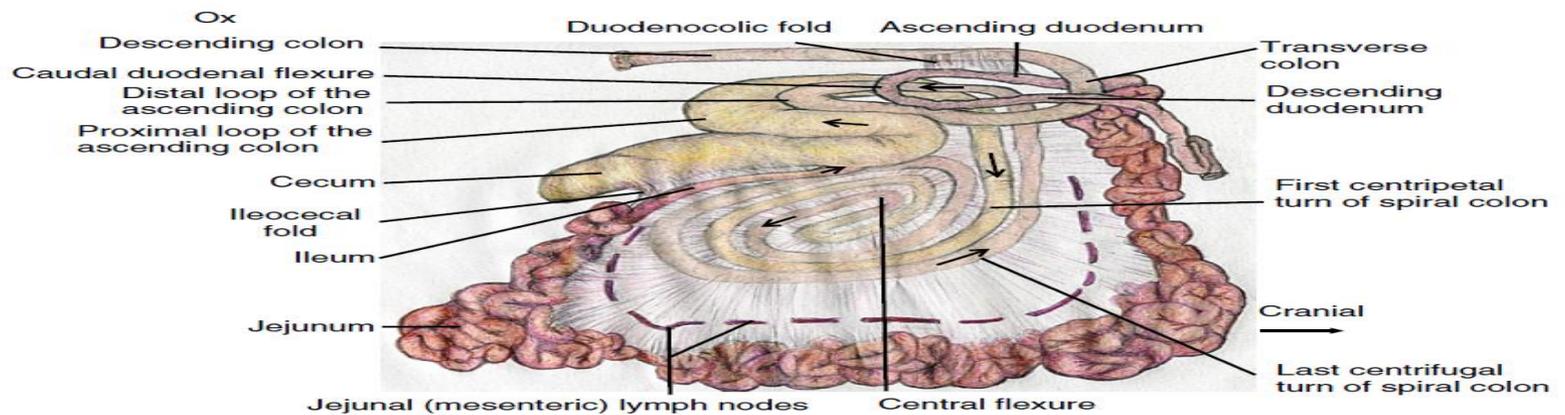
Anatomy

- It can divided to three regions of the large intestine:
- **cecum.**
- **colon (ascending, transverse, and descending parts).**
- **rectum**



Different Anatomy

- In sheep, goat, cattle





L.I. in Ruminant

- In ruminants, the ascending colon has
- **proximal.**
- **Spiral**
- **distal loops**
- form the spiral loop:
- **centripetal coils or turns.**
- **central flexure.**
- **Centrifugalcoils or turns**

Ascending colon



1) Abomasum

2) Duodenum

3) Jejunum

4) Ileum

5) Cecum

6) Proximal loop of ascending colon

7) Centripetal turns of spiral colon

8) Centrifugal turns of spiral colon

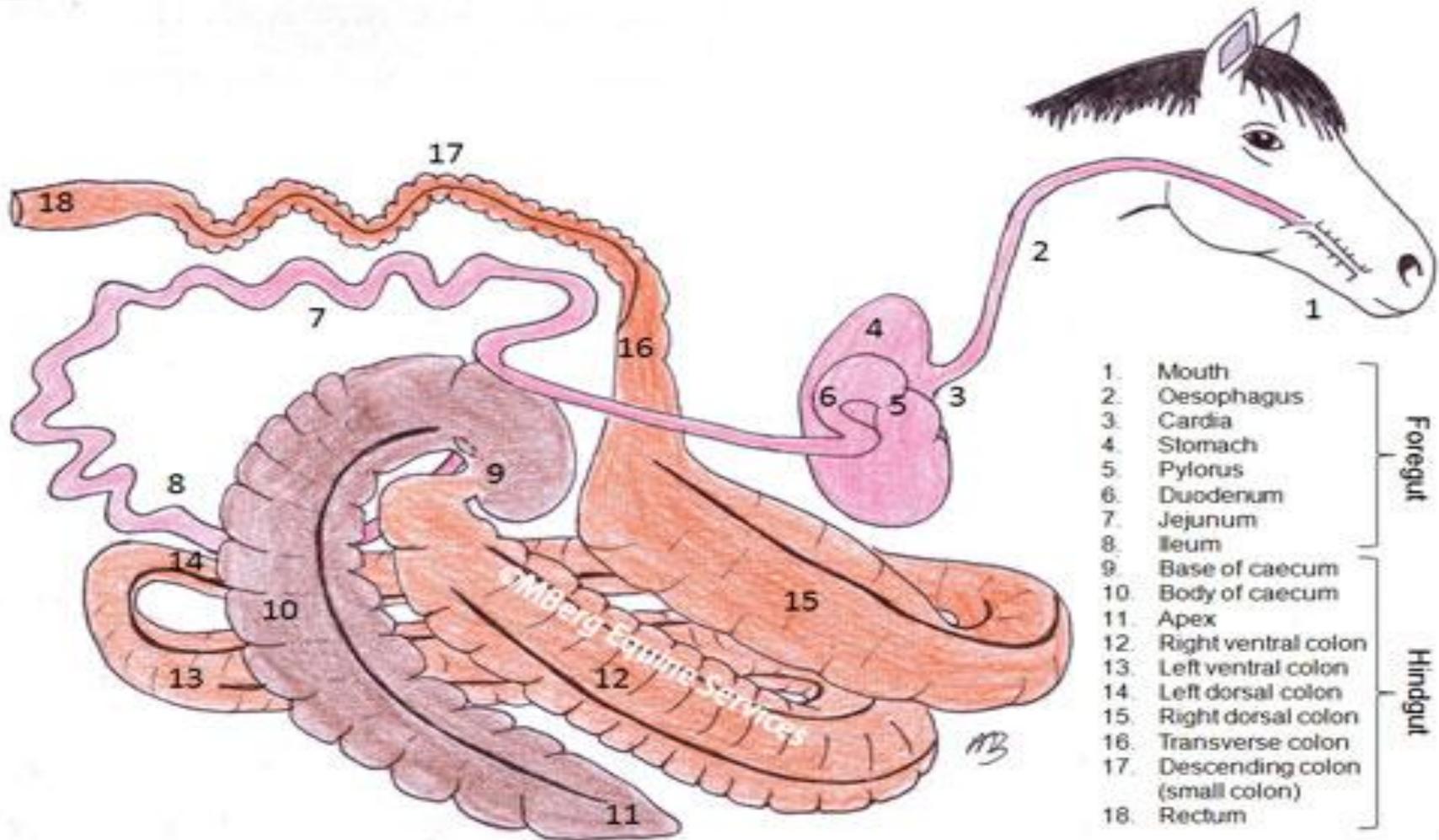
9) Distal loop of ascending colon

10) Transverse colon

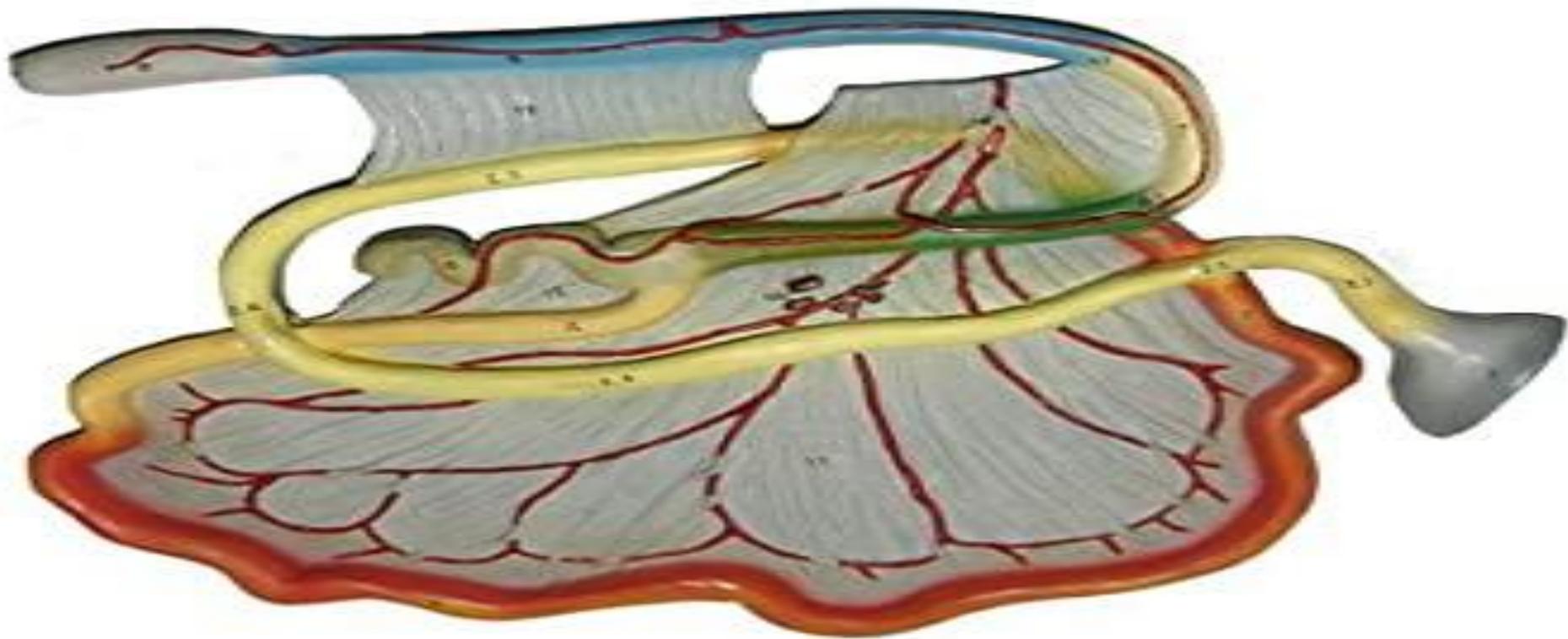
11) Descending colon

12) Rectum

In equine



In dogs and cats



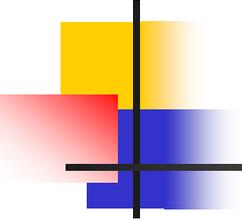
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Blood supply

- **The ileocolic**
- **The right colic artery**

Intussusception



- Intussusception is thought to be associated with abnormal motility in the intestinal tract.
- An intussusception comprises a longitudinal displacement of intestine in which one segment invaginates into the lumen of an adjacent segment and continues to move caudally in the direction of peristalsis.



Figure 3. Cecocolic intussusception at necropsy.



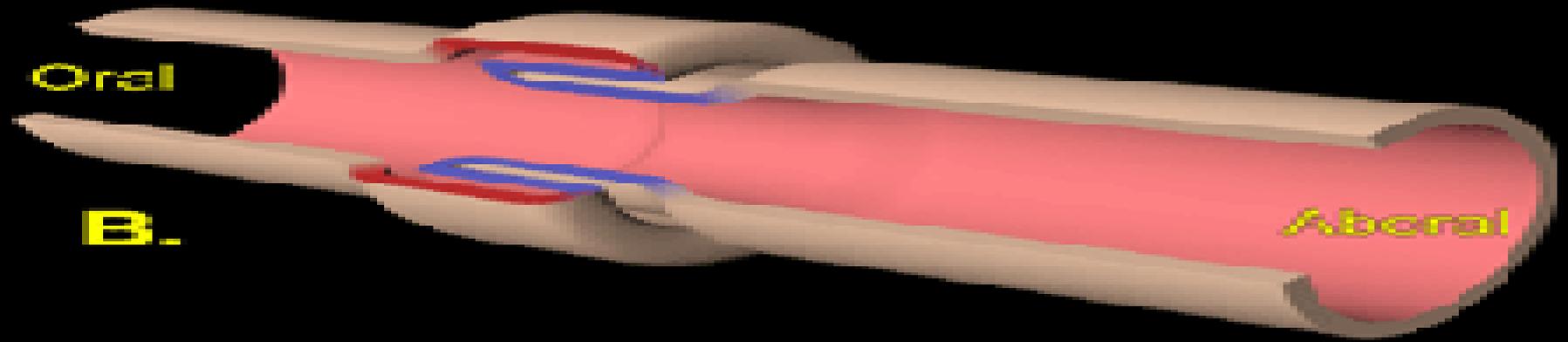
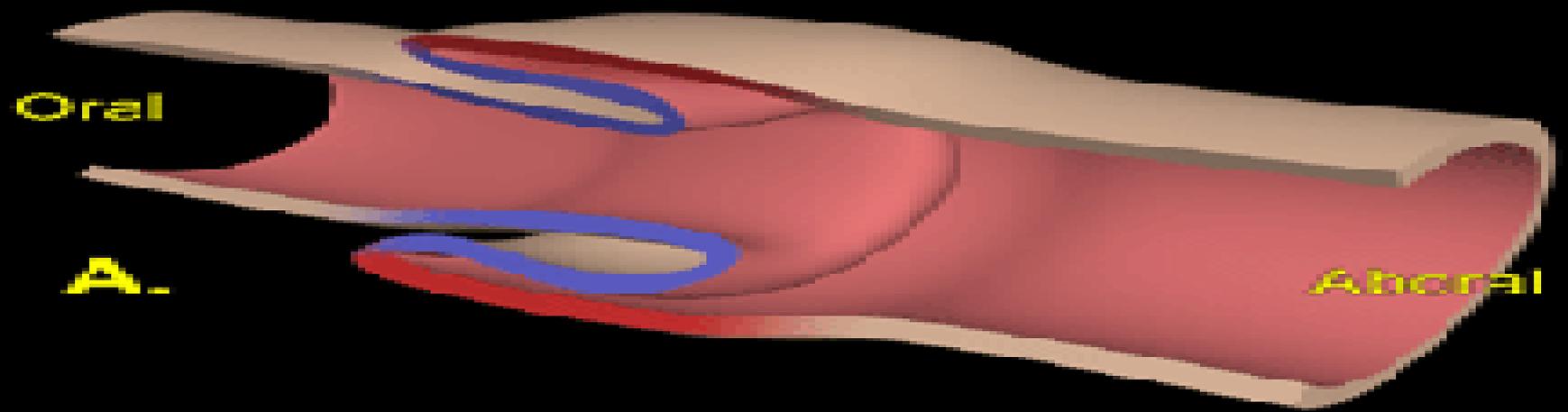
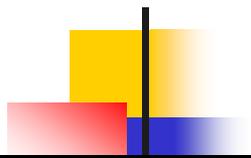
Clinical symptoms

- moderate to severe depression,
- partial to complete anorexia,
- abdominal distention accentuated in the right flank,
- mild signs of abdominal pain.
- Scant amounts of dark-red feces and mucous strands may be present.
- Tachycardia and dehydration may be evident.



Type of in

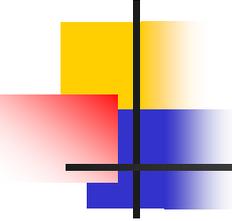
- ***Ileal-ileal intussusception***
- ***Ileocaecal intussusception***
- ***Caecocaecal intussusception***
- ***Caecocolic intussusception***





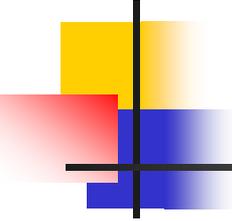
Diagnosis

- A diagnosis may be made by ultrasonography or rectal palpation, but exploratory laparotomy is the predominant method.
- Ultrasound
- X-ray



Treatment (pre surgery)

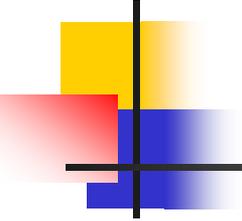
- **Fluid therapy**
- **Dehydration** and acid/base imbalances should be corrected before surgery.
- **Perioperative** antimicrobials should also be administered.



Surgery

- Treatment depends on the type of intussusception.
- Requires reduction by ultrasound-guided
- Laprotomy and correction the defect

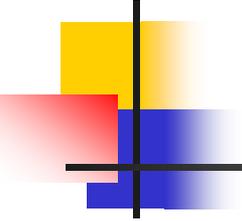
Strangulating obstruction



- Strangulating obstruction of the intestine is characterized by simultaneous interference of the intestinal blood supply and blockage of the intestinal lumen.



Clinical signs:



- Pain is moderate to severe and continuous, with no or only temporary relief from analgesics.
- Pulse rate may increase to level of 80 to 100/min.
- Mucous membranes become congested.
- Increased respiratory rate in response to pain.

Obstruction

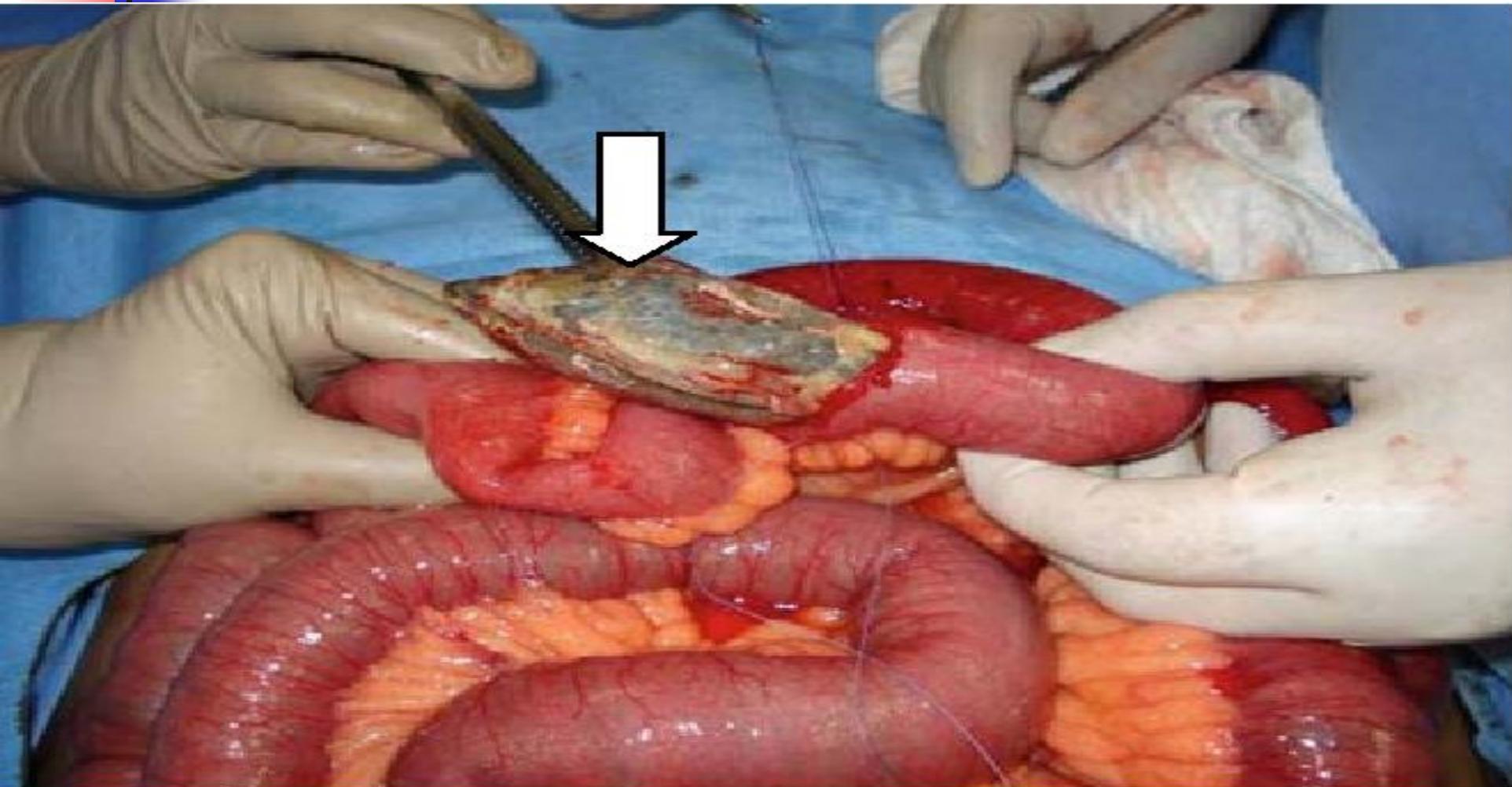
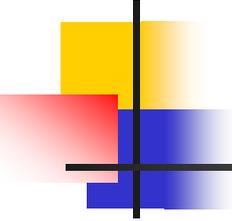


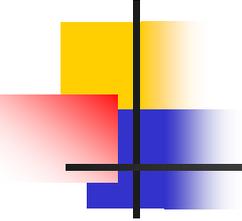
Fig. 1. Patient with a large, necrotic mass obstructing the lumen of the ICJ. H&E.

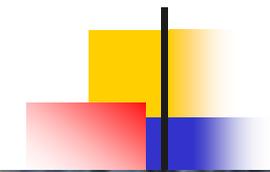


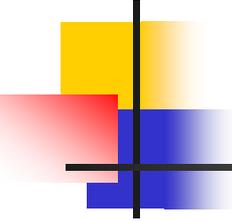
Treatment

- Surgical correction is performed in the standing animal by a right-flank laparotomy. Because adhesions usually involve more than just one part of a colon loop, resection and anastomosis rarely comprise a useful surgical option

RECTAL PROLAPSE

- 
- In rectal prolapse, one or more layers of the rectum protrude through the anus due to persistent tenesmus associated with intestinal, anorectal, or urogenital disease. Prolapse may be classified as incomplete, in which only the rectal mucosa is everted, or complete, in which all rectal layers are protruded.

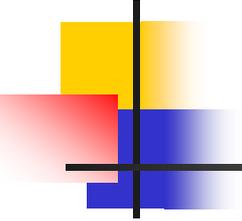




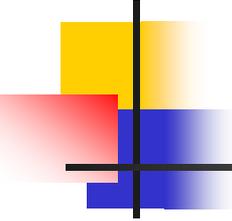
Etiology

- severe enteritis, endoparasitism, disorders of the rectum (eg, foreign bodies, lacerations, diverticula, or sacculations), neoplasia of the rectum or distal colon, urolithiasis, urethral obstruction, cystitis, dystocia, colitis and prostatic disease

Clinical Findings



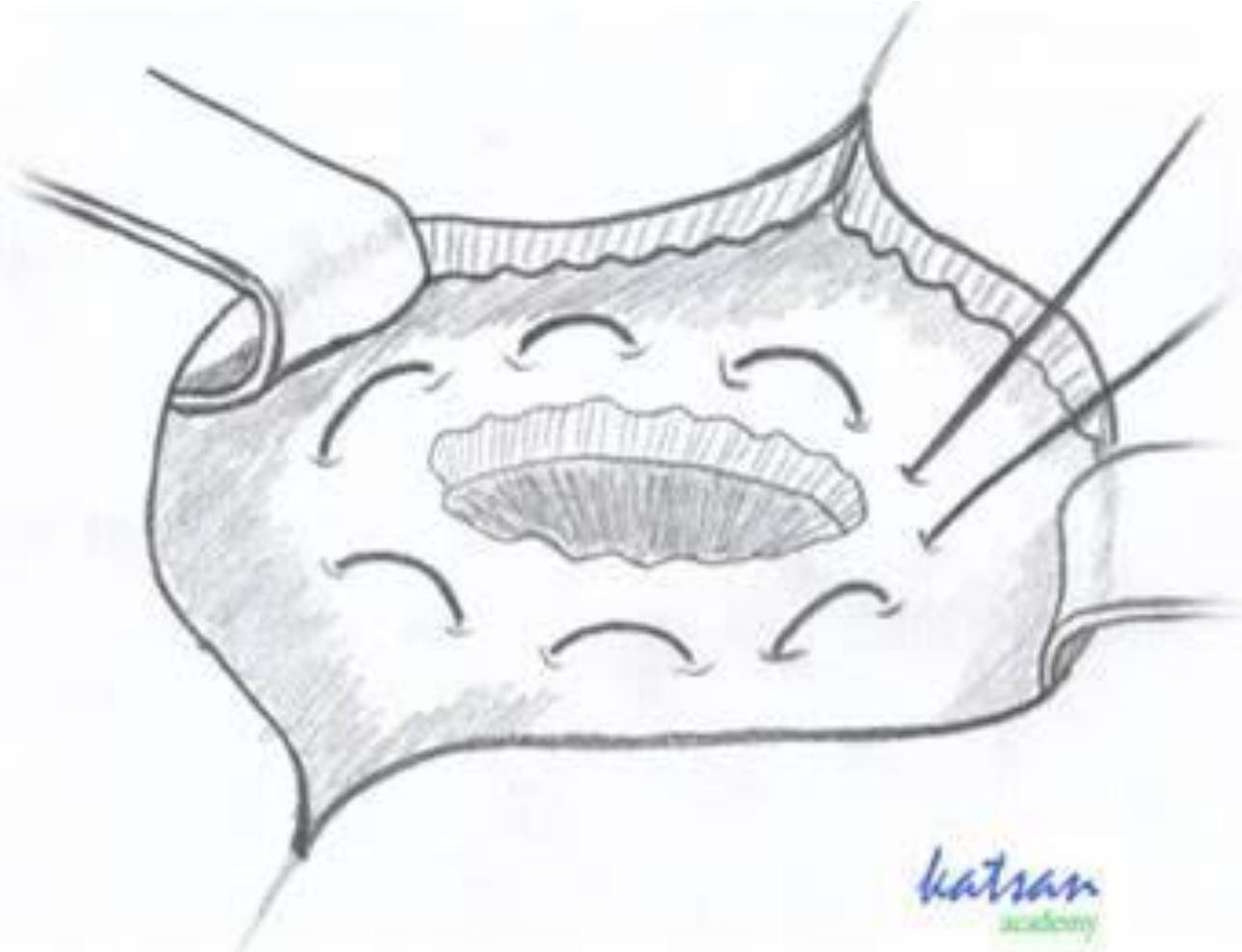
- Elongated , cylindrical mass protruding through the anal orifice, is usually diagnostic. The mass must be differentiated from prolapsed ileocolic intussusception by passing a probe.
- ulceration , inflammation, and congestion of the rectal mucosa



Treatment

- Replacement and Purse-String Suture

Replacement and Purse-String Suture



Submucosal Resection



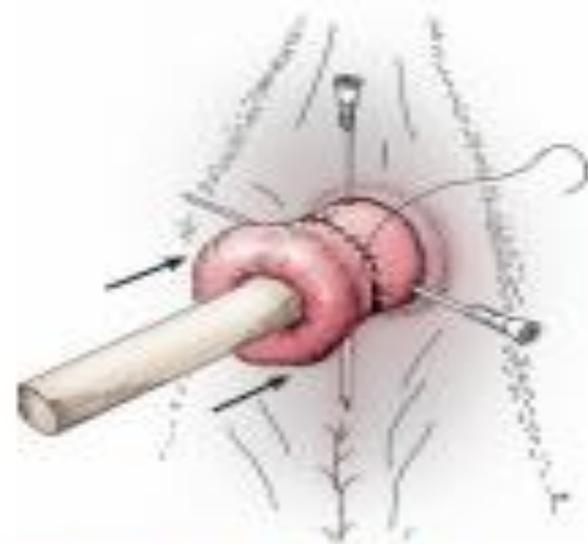


Figure 14-152 Final alignment of the mucosa with continuous sutures.

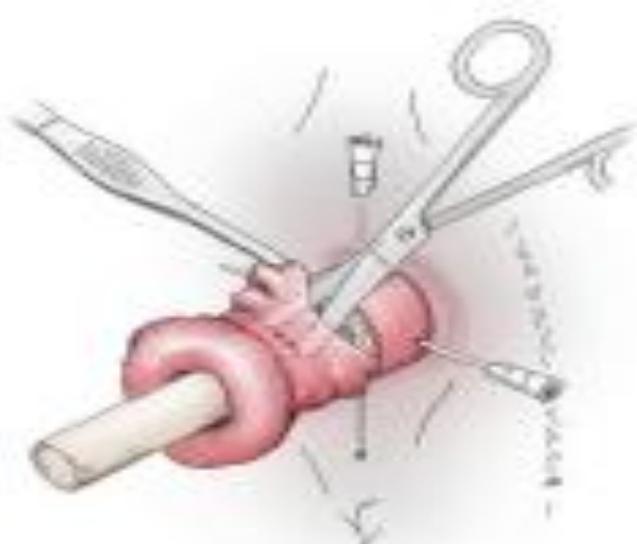


Figure 14-154 A plane is created toward the caudal aspect of the prolapse.

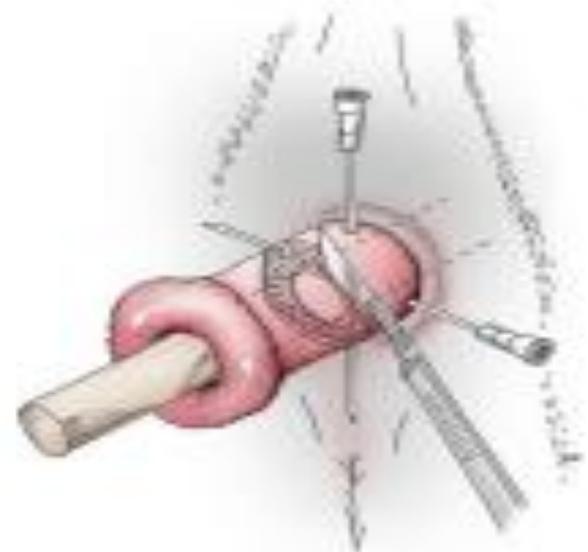


Figure 14-153 Schematic representation of the first step of stair-step amputation to correct rectal prolapse Type II. A circumferential incision is made just cranial to the necrotic area. All tissues except the inner mucosa and parts of the inner submucosa are incised.

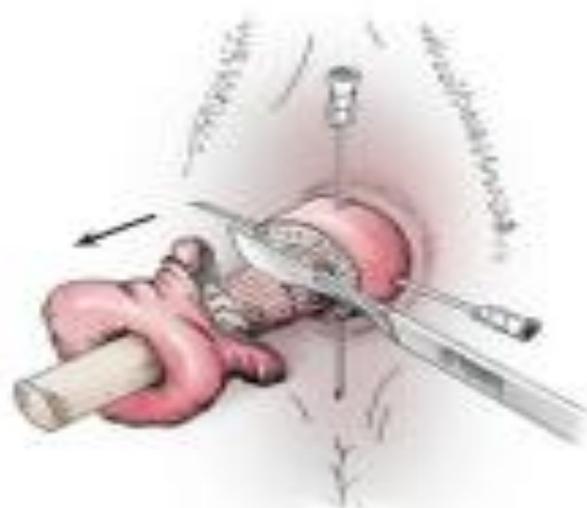
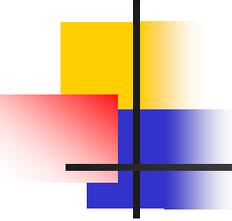
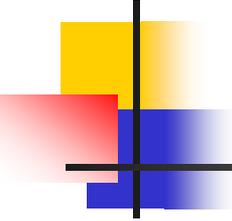


Figure 14-155 The inner segment is amputated.

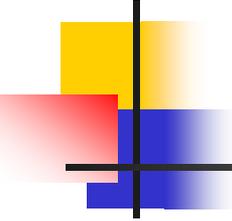
Rectal Tears

- 
- tear in the rectal or anal mucosa is seen as a result of a laceration inflicted within the lumen. Foreign bodies (eg, needles, and other rough material) have been implicated. Bite wounds and, trauma from rectal palpation are common causes. The tear may involve only the superficial layers of the rectum (partial tear) or penetrate all layers (complete tear).

Clinical Findings and Diagnosis:



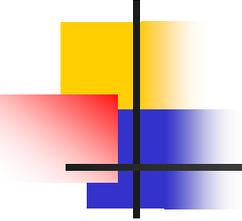
- Constipation and reluctance to defecate are usually attributed to pain. Diagnosis is based on tenesmus and hemorrhage, perineal discoloration, and inspection of the rectum and anus



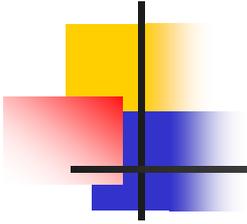
Classification

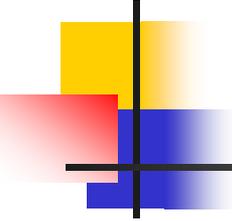
- Grade I tears involve the mucosa or submucosa.
- Grade II tears involve rupture of the muscular layers only.
- Grade III tears involve mucosa, submucosa, and muscular layers, including tears that extend into the mesorectum.



- 
-
- Grade IV tears involve perforation of all layers of the rectum and extension into the peritoneal cavity.

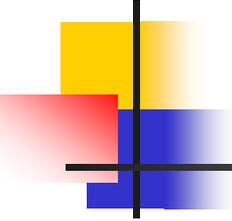
Treatment:





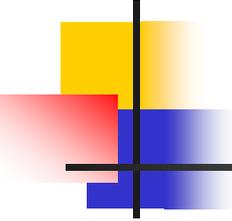
Rupture Of Rectum

- Spontaneous rupture of colon or rectum is a rare event. Protrusion of several loops of small bowel through the anal orifice is a bizarre condition which has only rarely



Congenital abnormality of colon:

- **Atresia ani, Atresia ani and recti, Atresia recti, atresia coli, or atresia ilei.**



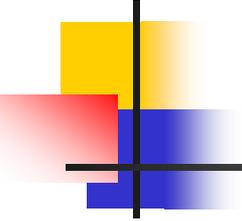
ATRESIA COLI

- is the complete absence of a portion of the colon is most frequently located in the mid-spiral loop of the ascending colon the most commonly affected segments

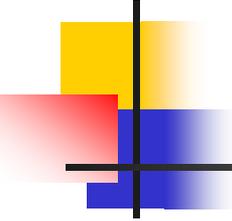


Figure 17-22: Intraoperative view of a 3-day-old calf with atresia coli in the midspiral loop of the ascending colon.

CLINICAL SIGNS

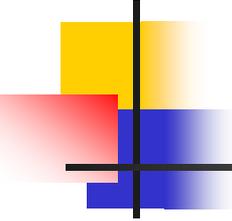


- Affected calves are usually born without incident and have a normal appetite until 12 to 48 hours later when they develop inappetence, abdominal distention, signs of abdominal pain, and progressive depression and weakness. The hallmark of the disorder **is that no manure is passed.**



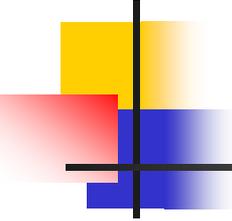
DIAGNOSIS

- clinical examination, tachycardia, hyperpnea, and normal to reduced rectal temperature are evident



Treatment

- Fluid therapy
- Non-steroidal drug
- Local anesthesia
- Surgery and make anastomosis



Postoperative management

- Fluid therapy
- NSA