**(Peter.D /Vaterinary Medicine / 11 Edition )**

# IMPACTION OF THE OMASUM:

Etiology:

1. Occur when feed is tough and fibrous Clinical findings:

1. Chronic recurrent bouts of indigestion occur
2. Decreased rumen motility
3. Infrequent and scanty feces
4. Refusal to eat grain and a negative ketone test
5. Pain may be elicited
6. Hard distended viscus palpated on deep pressure under the right costal arch or in the seventh to ninth intercostal spaces on the right side
7. It may also be palpable perrectum as a large, round, firm mass with a checkered surface to distinguish it from the smooth surface of the abomasum

Treatment:

Repeated dosing with mineral oil

# LEFT-SIDE DISPLACEMENT OF THE ABOMASUM

ETIOLOGY:

1. Gaseous distension
2. Hypomotility of abomasum possibly due to feeding high levels of concentrate to dairy
3. Cattle in late pregnancy

Epidemiology:

1. High-producing dairy cows within 6 weeks of calving
2. Insufficient crude fiber and roughage in ration
3. Concurrent disease such as hypocalcemia and ketosis PATHOGENESIS
4. In the nonpregnant cow, the abomasum occupies the ventral portion of the abdomen
5. As pregnancy progresses, the enlarging uterus occupies an increasing amount of the abdominal cavity
6. A decline in plasma concentration of calcium around the time of parturition may contribute to the abomasal atony.
7. The atonic gas-filled abomasum becomes displaced under the rumen and upward along the left abdominal wall
8. The
9. displacement of the abomasum invariably results in rupture of the attachment of the greater omentum to the abomasum

CLINICAL FINDINGS:

1. Complete anorexia
2. A marked drop in milk production
3. Varying degrees of ketosis
4. On inspection of the abdomen, the left lateral abdomen appears 'slab-sided' because the rumen is smaller than normal and displaced medially
5. Ruminal movements are commonly present but decreased in frequency and intensity
6. Auscultation of an area below an imaginary line from the center of the left paralumbar fossa to just behind the left elbow reveals the presence of high pitched tinkling sounds
7. Percussion, using a flick of the finger or a plexor, and simultaneous auscultation over an area between the upper third of the ninth and 12th ribs of the abdominal wall commonly elicits the high-pitched tympanitic sounds (pings) that are characteristic of LDA
8. Ultrasound examination can assist in the diagnosis of abomasal displacements

DIFFERENTIAL DIAGNOSIS:

* 1. Simple indigestion is characterized by normal vital signs, inappetence to anorexia, history of change of feed, reduced milk production, a relatively full rumen with reduced frequency and intensity of contractions, the absence of pings and spontaneous recovery in 24 hours
  2. Primary ketosis is characterized by inappetence, decline in milk production, strong ketonuria, normal vital signs, full rumen with reduced frequency and intensity of contractions, dry but normal amount of feces and response to therapy with dextrose and propylene glycol in 12-24 hours
  3. Traumatic reticuloperitonitis in its acute form is characterized by ruminal stasis, mild fever, a grunt on deep palpation over the xiphoid sternum and a slight neutrophilia with a regenerative left shift. However, in subacute and chronic traumatic reticuloperitonitis a painful grunt may be absent, the temperature and hemogram may be normal and on auscultation and percussion the atonic rumen may be mistaken for an LDA. The tympanitic sounds of an atonic rumen occur over a larger area than with LDA and are not as high-pitched as those of LDA –

they have been called 'pungs'. An exploratory laparotomy may be necessary to distinguish between the two, although laparoscopy, ultrasonography and abdominocentesis are alternatives

* 1. Vagus indigestion is characterized by progressive abdominal distension due to a grossly distended rumen with or without an enlarged abomasum, and is more common before parturition. Dehydration is also common
  2. Fat cow syndrome at parturition is characterized by excessive body condition, inappetence to anorexia, ketonuria, reduced to absent reticulorumen motility, but usually no pings over the rumen

TREATMENT:

1. Surgical correction is now commonly practiced and several techniques have been devised with emphasis on avoidance of recurrence of the displacement
2. Treatment of ketosis: Parenteral dextrose and oral propylene glycol

# RIGHT-SIDE DISPLACEMENT OF THE ABOMASUM AND ABOMASAL VOLVULUS:

ETIOLOGY:

* 1. is not well understood but it is probably similar to LDA
  2. Abomasal atony is thought to be the precursor of dilatation and displacement, and consequently abomasal volvulus

PATHOGENESIS

* + 1. Dilatation and dis placement phase:
       - abomasal atony occurs initially, resulting in the accumulation of fluid and gas in the viscus leading to gradual distension and displacement in a caudal direction on the right side (dilatation phase)
    2. Volvulus phase
       - the distended abomasum may twist in a clockwise or anticlockwise (viewed from the right side) direction in a vertical plane around a horizontal axis passing transversely across the body in the vicinity of the omasoabomasal orifice. The volvulus will usually be of the order of 180-270° and causes a syndrome of acute obstruction with local circulatory impairment and ischemic necrosis of the abomasum.

CLINICAL FINDINGS:

Dilatation phase:

1. Depression, Dehydration, no interest in feed, perhaps increased thirst, muscular weakness.
2. Affected cows will commonly sip water continuously
3. Percussion and simultaneous auscultation over the right middle to upper third of the abdomen commonly elicits a characteristic highpitched ping

in abomasal volvulus:

1. the clinical findings are usually much more severe than during the dilatation phase
2. The abdomen is visibly distended
3. depression and weakness are marked, dehydration is obvious
4. the heart rate is 100-120/min and respirations are increased Recumbency with a grossly distended abdomen and grunting may occur and represents a poor prognosis
5. The feces are usually scant, soft and dark in color CLINICAL PATHOLOGY

Serum biochemistry

1. There are varying degrees of hemoconcentration (increased PCV and total serum proteins)
2. Metabolic alkalosis
3. Hypochloremia and hypokalemia DIFFERENTIAL DIAGNOSIS: Dilatation and displacement of abomasum
4. Impaction of the abomasum associated with vagus indigestion
5. Subacute abomasal ulceration with moderate dilatation
6. Cecal torsion
7. Fetal hydrops
8. Chronic or subacute traumatic reticuloperitonitis Abomasal volvulus
9. Intestinal obstruction
10. Acute diffuse peritonitis TREATMENT:
11. Medical therapy for mild cases
12. Deflation of distended abomasum in calves
13. Surgical correction
14. Fluid and electrolyte therapy