

**MJF COLLEGE OF VETERINARY AND ANIMAL SCIENCE,
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DEPARTMENT OF VETERINARY PATHOLOGY

CIRCULATORY DISTURBANCES

▶ ACUTE PASSIVE HYPEREMIA

▶ Occurrence

- ▶ □ Occurs in conditions where there is sudden obstruction to the venous out flow as in prolapse, torsion, hernia or intussusception.

▶ Gross pathology

- ▶ □ There may be effusion into the peritoneal cavity.
- ▶ □ The involved part is dark-red and swollen due to haemorrhage and oedema.
- ▶ □ The intestinal wall is edematous with hemorrhages.

CHRONIC PASSIVE CONGESTION

- ▶ Occurrence
 - ▶ It is common in liver diseases or obstruction of the portal vein or may be part of the general venous congestion (with lesions in the heart and/or lungs).
- ▶ Gross pathology
 - ▶ The intestinal veins are dilated and stand out prominently. ▶ The intestinal wall is thickened and edematous ▶ Ascites is found
- ▶ Sequelae
 - ▶ The intestines become predisposed to enteritis. ▶ In long standing cases, there is fibrous thickening of the wall and atrophy of the glands.

▶ HEMORRHAGES

▶ Occurrence

- ▶ □ Haemorrhages are common on the mucosa and serous surface of the intestines.

▶ Etiology

- ▶ □ Specific infections in which this is a lesion. □ Enterotoxaemia (in sheep) □ Blood sucking parasites □ Hemorrhagic diseases

INFARCTION

- ▶ □ If circulation is obstructed either by embolus or by extramural pressure, infarction may result. □ Saprophytes normally resident in the bowel invade the infarcted part and produce gangrene

THROMBOSIS

- ▶ Occurrence
- ▶ □ Thrombosis of the intestinal vessels is common in the horses and is mostly due to larvae of *Strongylus vulgaris*.
- ▶ Pathogenesis
- ▶ □ The infective larvae burrow into the mucosa and travel along the intestinal arteries, crawling against blood flow along the intima and reach the anterior mesenteric artery where they settle. □ At that place the endothelium is damaged and a thrombus is formed. □ This thrombus may become organized and canalized. □ Complete organization of the thrombus is prevented by the penetration of larvae which produce irritation. □ The damage caused by the penetration of larvae as well as their continued presence weakens the wall of the artery leading to aneurysm. Replacement of the elastic tissue by fibrous tissue with lack of resilience of the arterial wall also contributes to aneurysm. □ The wall may sometimes rupture. □ Calcification of the fibrosed wall may sometimes further weaken the wall. □ Of various branches of the anterior mesenteric artery, it is in the right branch that thrombus more often occurs. This branch supplies the ventral colon and so thrombosis of the vessel produces ischemia of these parts. □ Thrombosis more often occurs in the right branch of anterior mesenteric artery, hence, ischaemia is more frequent in ventral colon.

EMBOLI

- ▶ □ Thrombotic emboli may occlude some branches of the artery resulting in infarction, gangrene, shock and death.















