This is a report on the occurrence of an intestinal volvulus in a pony caused by enteroliths in the caecum and colon.

Material and Methods

A female pony of 8 years old reported to be suffering from colic, anorexia, distension of abdomen, absence of peristalsis and defecation was brought to the Large Animal Clinic, Madras Veterinary College for treatment. The animal was treated with magnesium sulphate to increase the peristalsis but the animal died suddenly.

Results and Discussion

A thorough necropsy was conducted which revealed fibrinous adhesions of the abdominal organs with the walls of the abdominal cavity along with accumulation of fluid mixed with shreds of fibrin. Serosal surface of the distal portion of the ileum, caecum and colon was severely congested and haemorrhagic. Portion of the distal end of the ileum of about two metres length had twisted clockwise upon itself and appeared dark red in color and distended with gas and fluid (Fig.1). The wall of the affected segment was oedematous and congested. The mesentry was thickened and congested. Mesenteric lymphnodes were congested and enlarged. The mucosal surface of the ileum was highly congested and the lumen contained blood mixed ingesta. The caecum was impacted with solid partially digested ingesta along with two firm irregular shaped enteroliths of 13 cms height 5 cms diameter and 9 cms height 4 cms diameter size and weighing 800g and 300g respectively. The surface of the enteroliths were rough. The enterolith was divided to identify the nidus. Thenidus consisted of plant fibres and shreds of Volvulus due to enteroliths in apony plastic wires around which the mineral was deposited.
The chemical analysis of the enterolith revealed ammonium magnesium phosphate. The mucosa was oedematous, inflamed and was haemorrhagic. There was no rupture of the intestine. Microscopically, the intestine revealed extensive necrosis of the epithelium and infiltration of lymphocytes in the submucosa. Although, many factors were identified for the intestinal volvulus, foreign bodies like enteroliths by their weight and obstruction of the intestine make the part of the intestine heavy and aid in its winding around the parts. Impaction of the ingested material in the intestine adds to the disease. The mean age of the horses affected with enteroliths was 10 years (Rose et al., 1980; Evans et al., 1981) although, age of more than 4 years were considered at risk for developing enteroliths. The exact time required for the formation of the enterolith was not known but it is reported that two years were enough to produce an obstructive enterolith (Rose et al., loc. cit and Evans et al., loc. cit). However, Peloso et al. (1992) reported enteroliths in a 11 month old horse. Wheat bran was considered to be a risk factor for the formation of enteroliths because of its high phosphorous and magnesium. Diets high in wheat bran, alfaalfa hay, feed and water magnesium concentration have been incriminated in the formation of intestinal concretions (Peloso, et al., 1992). The death of the pony is due to the intestinal volvulus which caused shock due to the intestinal obstruction and endotoxaemia.

References