

RUPTURE OF THE CAECUM AT PARTURITION

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SUMMARY

Based on four fatal cases observed in Thoroughbred mares, the signs and *post-mortem* lesions are described. The authors speculate on aetiology, pathogenesis and possible treatment.

INTRODUCTION

This condition, a rapidly fatal rupture of the caecum during the act of parturition in the mare, is well known to veterinarians in Thoroughbred breeding practices, although rarely described in the literature. Voss³ recorded a case, and Day¹ considered the incidence to be less than 0.1 per cent foaling mares in the Newmarket (England) area.

The following description is based on four cases in Thoroughbred mares.

CLINICAL SIGNS

The mare is apparently normal up to the beginning of parturition. Preparturient behaviour, relaxation of the sacro-iliac ligaments and dropping of wax from teats are normal. Parturition appears to begin normally, at least until rupture of the allanto-chorion and subsequent discharge of watery allantoic fluid from the vulva. It is after this point, during the second stage of labour, that it becomes apparent to the observer that something is wrong. Instead of the normal, powerful straining of thoracic, abdominal and back muscles, straining movements are either weak or absent. Vaginal examination reveals that the foetus is lying in the normal birth position with the forefeet and muzzle within the fully dilated cervix or just posterior to it. If the mare is lying down, the muzzle and forefeet may appear at the vulva. In spite of a fully dilated cervix and a foetus which is normal as regards position and size, the mare appears to be unable to expel it.

Delivery of the foal is accomplished by the veterinarian without difficulty, but subsequent observation of the mare shows that recovery from the stress of foaling does not proceed as usual. Increased patchy sweating, pawing of the ground, looking at the flank, increasing pulse and respiratory rates, and cyanotic mucous membranes, all indicate an acute abdominal catastrophe.

The course is rapidly fatal, and mares succumb approximately four to six hours after delivery of the foal.

PATHOLOGY

At *post-mortem* examination, a tear is found at the lesser curvature of the caecum, 10-15 cm ventral to the ileocaecal orifice. The rupture may be less than 5 cm in length and it is noteworthy that the edges of the tear in the caecal wall curl outwards and not inwards. The extent of macroscopic signs of peritonitis is related to the degree of soiling by caecal contents, but in two of the four cases, it was confined to an area of 2-3 cm in radius around the edges of the tear.

Histopathological examination of the caecal wall adjacent to the tear does not necessarily show peritonitis, nor is there any evidence of weakening at the point of rupture. The uterus is normal and shows no lesions of the endometrium, myometrium or peritoneum.

AETIOLOGY

The aetiology of the caecal rupture in so circumscribed an area of the caecal wall remains obscure, but it would appear that at parturition a particular section of the wall of the caecum becomes a target area for the tremendous intra-abdominal pressures of which a straining mare is capable. Hypertrophy of the circular layer of the caecal musculature was recorded by Kalsbeek² in his description of a case of caecal rupture and this may well contribute to tearing of the wall.

TREATMENT

No attempt at treatment has been described. Since rupture of viscera other than the caecum have been successfully repaired in horses, it is not unreasonable to propose that repair of the tear in the caecum may be successful in some cases. Unfortunately, access to the lesser curvature of the caecum is extremely difficult even *via* a full-length midline laparotomy incision, owing to the firm attachments of the base of the caecum.

In two experimental Thoroughbred-cross mares, a trans-caecal approach to the area ventral to the ileocaecal and caecocolic orifices was carried out under general anaesthesia. A high right flank incision, 25-30 cm in length, allowed the base of the caecum to be partly exteriorized. The caecum was then incised the full length of the laparotomy incision, whereupon the edge of the caecocolic orifice was firmly grasped and brought out, thus bringing the area of the lesser curvature of the caecum within surgical reach.

DISCUSSION

Since peritonitis in some cases is insignificant, the primary cause of the rapid collapse and death appears to be cardiovascular rather than inflammatory. Neurogenic factors resulting from acute pain may be important in this respect, and prompt recognition of the syndrome followed by general anaesthesia, oxygenation, laparotomy and repair may eventually prove of value in selected cases, where soiling of the visceral peritoneum is minimal.

REFERENCES

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