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Reproductive tract trauma

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Pregnant and post partum mares can develop life-threatening traumatic diseases within the gastrointestinal and genital tracts. Gastrointestinal diseases to which the peripartum mare is most prone are large colon volvulus, large intestinal impaction, diaphragmatic hernia, caecal rupture, rectal and small colon prolapse, rectal tear, avulsion of the mesocolon off the distal part of the small colon, evisceration through a vaginal or urethral tear, and strangulation of small intestine in the uterine broad ligament. Urogenital diseases that cause colic in the periparturient mare are uterine contractions, ruptured uterus, bladder prolapse through a torn vagina, haemorrhage into the broad ligament, retained placenta, dystocia, uterine torsion, periparturient genital injury, intra-abdominal haemorrhage, uterine inversion, hydroaflaentositis, and herniation of the abdominal wall through a prepubic tendon rupture or through the inguinal region. Severe haemorrhage from rupture of the uterine artery and parts of the reproductive tract usually occur during foaling. In these cases, treatment is directed at correcting haemorrhagic shock.

Perineal lacerations occur during parturition when the foal's limb(s) or head are forced caudally and dorsally, and are most common in the primiparous mare. If the foot punctures the rectovaginal layers, a fistula forms. If the foot tears through them, a third degree perineal laceration is inflicted, and this is the most common injury. At 4-6 weeks after parturition, when inflammation has subsided in the torn tissues, these are repaired by surgical methods to restore the perineal body. The prognosis is good.

Peritonitis in the peripartum mare can be caused by tearing or vascular compromise of the gastrointestinal, reproductive, or urinary tracts. Most uterine tears are thought to occur during stage 2 of delivery, with or without dystocia. Within the first few days after parturition, mares with uterine tears have depression, anorexia, colic and fever. Diagnosis of uterine tear can be made by transrectal or transvaginal uterine palpation, although palpation allows limited access. Most tears are in the right uterine horn. Uterine rupture is considered the most likely diagnosis in post partum mares with peritonitis and no cytological evidence of gastrointestinal tract rupture, even when a tear cannot be palpated. Surgical repair of a uterine tear has been recommended for preservation of the mare's life and breeding soundness. Mare survival can be 75% after uterine tear whether treated medically or surgically. Although the difference in cost between medical and surgical treatment is negligible, surgery has the added advantage of allowing assessment of other possible causes of peritonitis when a tear cannot be palpated.

Torn mesocolon and small colon necrosis should be suspected in a post partum mare with mild colic, depression, and clinical evidence of peritonitis that starts after parturition and then persists over the following days. Usually the distal part of the small colon is affected, which can complicate access for resection and anastomosis. This injury could be caused by blunt trauma from the foal during delivery or rectal and small colon prolapse. When the latter occurs and correction is possible, the mare should be closely observed for signs of progressing peritonitis. In some cases, the roughened mucosa of the affected segment can be palpated per rectum and rectal impaction might be evident also. The prognosis is poor unless the necrotic segment is accessible for resection.

Lacerations of the cervix occur during normal or difficult parturition and the typical injury is a wedge-shaped full-thickness defect in the cervix. There might be more than one tear and small superficial tears do not need to be repaired. Failure to restore normal cervical incompetence can lead to endometritis. Palpation can provide more information about the extent of the tear than visual inspection and surgical repair involves trimming the edges of the defect and then performing a 3-layer closure of the cervical mucosa, muscularis and vaginal mucosa. There is a risk of recurrent laceration at the same site during subsequent foalings.

Diaphragmatic hernias are uncommon causes of colic in the post partum period. Possibly the expanding uterus could force abdominal contents through an existing defect in the diaphragm or stretch and tear the diaphragm during a traumatic event, such as a fall. Diagnosis can be made by identifying intestine within the thoracic cavity and interruption of the diaphragmatic silhouette by radiography and ultrasonography.

A 0.1% incidence of caecal rupture has been reported for mares during parturition. These mares are apparently normal in the preparturient period. Delivery of the foal is usually accomplished with assistance and then the mare shows clinical signs of acute peritonitis, Gram-negative sepsis and cardiovascular shock. Death is within hours or mares are subjected to euthanasia immediately, and necropsy reveals acute rupture of the ventral aspect of the caecal body.

A type IV rectal prolapse, in which the peritoneal rectum and a variable length of the small colon form an intussusception through the anus, is seen in mares after dystocia. The usual presentation of a prolapse is a mucosal mass protruding beyond the anus with a variable amount of inflammation, cyanosis, bruising or necrosis. Colic and peritonitis can develop with type IV rectal prolapse, and abdominocentesis might be indicated in such cases. Epidural anaesthesia can be applied to reduce straining and to facilitate manual correction. Laparoscopy can be used to determine whether the mesocolon is ruptured and to assess viability of the involved small colon. A submucosal resection may be indicated if the prolapsed tissues are devitalised, the prolapse recurs after conservative treatment, or the horse continues to strain. The procedure can be performed with epidural or general anaesthesia. Post operative management includes the administration of laxatives, a laxative diet and, if necessary, careful digital removal of impacted faeces from the rectum.

Further reading
