Perirectal pyogranulomatous inflammation causing rectal obstruction and colic in a Norwegian Fjord gelding

Perirectale pyogranulomateuze ontsteking als oorzaak van een rectale obstructie en koliek bij een Noorse Fjordruin

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ABSTRACT

An 18-month-old Fjord gelding was examined for colic and clinical signs of tenesmus and dyschezia. Rectal examination and transrectal ultrasonography showed a firm tissue mass on the dorsolateral aspect of the left rectal wall. Histopathology of multiple perirectal tru-cut biopsies revealed a pyogranulomatous inflammation. Cultures for microorganisms were negative. A diagnosis of extra-luminal rectal pyogranulomatous inflammation was made. Conservative treatment resulted in complete remission.

INTRODUCTION

Extra-luminal obstruction of the rectum is uncommon in horses. Only a few cases have been reported in the literature (Sanders-Shamis, 1985; Ayres and Wagner, 1994; Magee et al., 1997; Torkelson, 2002), and most of these have been in young horses. Extraluminal obstruction of the rectum in horses can be caused by perirectal abscesses, anorectal lymphadenopathy, hematoma formation, perirectal strictures and neoplasia (Sanders-Shamis, 1985; Ayres and Wagner, 1994; Magee et al., 1997; Torkelson, 2002). Organisms previously isolated from perirectal abscesses in young growing horses include Streptococcus zooepidemicus and Escherichia coli (Sanders-Shamis, 1985; Magee et al., 1997).

Abscessation can occur secondary to a rectal puncture or tear, to rectal inflammation or to lymphadenopathy, and it can also occur as a sequel to dystocia (Sanders-Shamis, 1985; Ayres and Wagner, 1994). Clinical findings include abdominal pain, tenesmus, dyschezia, lack of fecal production, fever and, less frequently, dysuria (Sanders-Shamis, 1985; Ayres and Wagner, 1994; Magee et al., 1997; Torkelson, 2002). Most of the reported cases of perirectal abscessation are dorsal to the rectal wall (Magee et al., 1997), although ventral and lateral locations have also been reported (Sanders-Shamis, 1985; Magee et al., 1997). Organisms previously isolated from perirectal abscesses in young growing horses include Streptococcus zooepidemicus and Escherichia coli (Sanders-Shamis, 1985; Magee et al., 1997).

This paper describes an extra-luminal rectal obstruction and colic due to perirectal pyogranulomatous inflammation in a Fjord pony.

CASE HISTORY

An 18-month-old Fjord gelding was presented for colic of four hours duration. An elevated heart rate and impacted rectal feces were noted by the referring veterinarian. Excessive straining and the hard fecal consistency prevented a thorough rectal examination from being performed. Passage of a nasogastric tube did not yield any net reflux. Mineral oil, electrolyte water, phenylbutazone (1g) and flunixin meglumine (350mg) had been administered prior to referral.

On presentation, the gelding was quiet but responsive. Mild abdominal distension, tenesmus and urine dribbling were evident. Clinical examination revealed a pulse of 60 beats per minute, a respiratory rate of 28 breaths per minute and a rectal temperature of 37.20C. The mucous membranes were pink, with a capillary refill time of < 2 seconds. The gut sounds were depressed but audible in all four abdominal quadrants. No reflux was obtained on passage of a nasogastric tube.

Rectal examination revealed dry, firm feces in the rectum. Rectal evacuation with a soapy enema was performed following administration of caudal epidural anesthesia. A firm tissue mass was palpable approximately eight centimeters cranial to the anus on the left dorso-lateral wall of the rectum and extending cranially. The mass resulted in narrowing of the rectal lumen to approximately two centimeters diameter. Firm feces were palpable immediately cranial to the mass. No other abnormalities were evident on rectal palpation.
day 5 revealed a reduction in the size of the mass (now measuring ~ 3.0 x 1.0 cm). The pony was discharged from the hospital and treatment was continued with oral trimethoprim sulfadiazoxazole at 24mg/kg twice daily PO for 14 days. Recommendations to continue feeding a high moisture diet were also made.

Rectal palpation and ultrasound examination performed two weeks later revealed a 2cm hyperechoic region in the area of the previous mass. This was most consistent with scar tissue formation. There was no fluid visible. A repeat CBC including fibrinogen was normal. The normal diet was slowly re-introduced, along with the normal turnout/grazing period.

After four weeks, the pony was healthy and no abnormalities were detected on rectal palpation by the referring veterinarian.

One year later the pony remains in good condition and no further episodes of tenesmus, dyschezia or colic have been seen.

**DISCUSSION**

The clinical findings in this report were consistent with previous reports of perirectal abscesses or anorectal lymphadenopathy in horses (Sanders-Shamis, 1985; Ayres and Wagner, 1994; Magee et al. 1997; Torkelson, 2002). Common signs of extraluminal obstruction of the rectum include abdominal pain, tenesmus, dyschezia, lack of fecal production, fever and, less frequently, dysuria. Urine retention is a complication seen in humans with perirectal abscesses (Marcus et al., 1995). The dysuria seen in this case could have been caused by direct pressure on the underlying urethra or may have been the result of neuritis secondary to regional inflammation resulting from the extraluminal obstruction (Magee et al., 1997).

Anorectal lymphadenopathy has been reported to cause colic and result in perirectal abscess formation in young horses (Magee et al., 1997). It is possible that the swelling in this pony could have originated from the anorectal lymph nodes. Ten to thirty lymph nodes are positioned dorsally along the rectum in the retroperitoneal space and receive drainage from the anorectum, anus, urethra or may have been the result of neuritis secondary to regional inflammation resulting from the extraluminal obstruction (Magee et al., 1997).

Improper healing of rectal tears can possibly lead to abscess or fistula formation, particularly with grade III rectal tears (Freeman, 1999). There are reports of spontaneousidiopathic rectal tears in the literature,
and most of these tend to be transversely orientated (Slone et al., 1982). In comparison, iatrogenic rectal tears tend to involve the dorsal aspect of the rectum and are located 15-55cm from the anus, parallel to the long axis (Magee et al., 1997). Hematoma formation is most likely to occur as a result of trauma such as homosexual activity, dystocias, pelvic fractures and possibly rectal palpation.

There was no history of trauma or intramuscular injections, no recent rectal examination had been performed, and the pony was housed with a filly pasture mate.

Diagnosis of rectal obstruction should include rectal palpation and ultrasonographic examination. Percutaneous or per rectum aspiration/biopsy of the mass are most likely to provide a definitive diagnosis. Serial rectal and ultrasound examinations also aid in monitoring response to treatment. If the size of the animal prevents rectal palpation, proctoscopy can be used and radiographs can aid in confirming the position and extent of the mass (Ayres and Wagner, 1994).

As in this pony, conservative management is indicated in the majority of cases: the removal of impacted feces and the administration of antibiotics, of laxatives to soften feces, and of anti-inflammatory drugs to relieve pain and inflammation are all important. In some cases surgical drainage of the mass is necessary (Sanders-Shamis, 1985; Magee et al., 1997). Indications for surgical intervention include: failure of medical management, spread of the abscess into the peritoneal cavity, signs of pain that cannot be controlled by relieving constipation, detection of a mature abscess ultrasonographically, and secondary complications that necessitate abdominal exploration. Surgery was required in one foal due to its inability to urinate (Marcus et al., 1995).

Dorsally located abscesses are drained into the rectum. Those located ventrally are drained by an ipsilateral incision exterior to the anal sphincter or ventral into the vagina in mares and ventral to the anus in males. The abscess cavity should then be flushed with a 10% povidone-iodine solution for several days (Sanders-Shamis, 1985). Horses with peritonitis require an exploratory celiotomy. The prognosis for horses with an uncomplicated abscess is good.

In some reported cases, surgical treatment under anesthesia was elected due to the close proximity to the internal iliac arteries. In such cases, the abscess was partially dissected and removed, and a marsupialization procedure was performed to allow drainage into the rectum (Ayres and Wagner, 1994).

No underlying cause of the acute pyogranulomatous inflammation in this pony was identified. Pyogranulomatous inflammation would be suggestive for a penetrating foreign body (e.g. plant material) or bacteria or fungal granulomata. However, culture and special stains for granuloma forming organisms were negative.

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REFERENCES


