How to Perform First Aid on Rectal Tears in Horses

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The first aid measures taken following a rectal tear are of paramount importance in improving survival and minimizing litigation. Authors' address: Steinbeck Country Equine Clinic, 15881 Toro Hills Avenue, Salinas, CA 93908; email: Grockeastman@aol.com.

1. Introduction

Rectal injuries continue to be one of the common sources of lawsuits brought against equine veterinarians. Major malpractice carriers have taken the stance that rectal tears are a "hazard of the trade."[a] Assuming the circumstances surrounding the injury were appropriate, malpractice carriers will support equine veterinarians.[a] Liability insurance will only pay on a claim when negligence is proven to have occurred. When equine veterinarians are held as negligent, it is frequently for the events that transpire after the injury occurs, specifically the communication with the horse owner and the first aid measures that were initiated. When a tear occurs, the practitioner needs to be proactive in communicating with the owner regarding the possible outcomes. A "wait and see" approach may be deemed as negligence. A thorough understanding of appropriate first aid measures and how to minimize litigation will improve patient survival and decrease legal liability for equine veterinarians.

The risk of rectal tears can never be completely eliminated. Things to consider when performing rectal examinations include education of naive clients to the potential risk, avoidance of rectal examinations without access to appropriate materials to perform emergency first aid, and control of the circumstances surrounding the examination. It is not practical to discuss the risks and benefits of rectal examination with every horse owner before the procedure. Most experienced horse owners are aware and accepting of the low but potential risk of a rectal injury. Time, however, should be spent educating new horse owners regarding the risk and why the examinations are crucial to the nature of our work. Practitioners should avoid engaging in rectal examinations unless they are prepared for the worst-case scenario of a rectal injury and are equipped with appropriate first aid materials.

2. Materials and Methods

Prevention of Rectal Tears

Before performing a rectal examination, practitioners should exercise caution and employ chemical and physical restraint to reduce risk. Performing a rectal examination on a young fractious animal without sedation and appropriate physical restraint may be deemed negligent. A recent paper showed a decrease in rectal pressure by 68% after administration of N-butylscopolammonium bromide.[1] This

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chemical has a very rapid onset of action; it significantly reduces rectal straining and should be considered before palpation of higher risk horses. It will cause a transient increase in heart rate, so it should be given after the physical examination, particularly in horses with abdominal pain. In one of the author's practice, administration of N-butylscopolammonium bromide[b] (0.3 mg/kg) has become routine during palpation for abdominal disease and useful for reproductive evaluations. In addition to decreasing the risk of a rectal injury, the relaxation that occurs after administration of this drug makes palpation of abdominal organs easier. The same study referenced earlier showed that infusion of lidocaine into the rectum was not effective at decreasing rectal pressure.[1]

When a tear occurs, the examiner will later recall having felt a slight increase in rectal tone and straining before the injury. Ample time spent cleaning out the rectum of all fecal material and relaxing your hand while the patient strains are of paramount importance in the reduction of risk. When a horse strains against you, relax your hand, and allow it to be pushed back with the wave of peristalsis. This coupled with copious lubrication will greatly minimize the risk of a rectal injury.

First Aid

One of the first things that should be performed after a rectal injury is a caudal epidural. This may take up to 30 min to work and therefore, should be performed quickly. A combination of xylazine (0.17 mg/kg) and lidocaine (0.22 mg/kg) will increase the duration of action and minimize ataxia.[2] An example for a 1000-lb horse would include 0.75 ml of xylazine hydrochloride and 5 ml of lidocaine. By going in the cranial most palpable space (S6-Co1 or Co1-Co2), a larger portion of the caudal small colon and rectum will be desensitized. The epidural is effective when there is loss of tail tone and loss of anal tone. After this is achieved, a bare, well-lubricated arm should be carefully inserted into the rectum to clean out any remaining fecal balls and quickly assess the tear. Sedation for this step should be achieved without the use of acepromazine, because this drug can lead to systemic hypotension that may compound circulatory shock.

Another top priority after a rectal injury is systemic antibiotics and anti-inflammatories. Because of the severity of septic peritonitis that can occur, broad-spectrum antibiotics should be selected. The authors recommend a combination of penicillin (15,000 IU/kg, q 12 h) and gentamicin sulfate (6.6 mg/kg q 24 h). Flunixin meglumine should be administered (1.1 mg/kg) to decrease inflammation and pyrexia, and to combat the effects of endotoxemia.

One of the most important aspects of first aid is to protect the tear from progressing into a more serious one and to prevent fecal balls from becoming packed in the defect. The authors strongly recommend the placement of a "rectal tampon" (Fig. 1) to decrease further contamination or rectal-tear expansion. A rectal tampon is made by tying a knot in one end of a length of 3-in stockinette that will be sufficient to reach from the external anal sphincter to at least several inches cranial to the tear. The open end is then partially filled with roll cotton, and the remainder of the tampon is well lubricated and sprayed with povidone iodine. Leaving the end that will be closest to the sphincter open, the tampon may be placed by gently inserting the tied knot into the rectum and pushing it as far forward as possible (Fig. 2). After this step, additional cotton may be gently pushed into the lumen of the stockinette until the tampon is filled (Fig. 3). Care should be taken to pack the rectum just tight enough to prevent the passage of fecal balls. To decrease the possibility of the tampon being passed, a purse-string suture or towel clamps should be placed across the anus before referral (Fig. 4). As an alternative, povidone-iodine soaked gauze or cotton may be inserted into

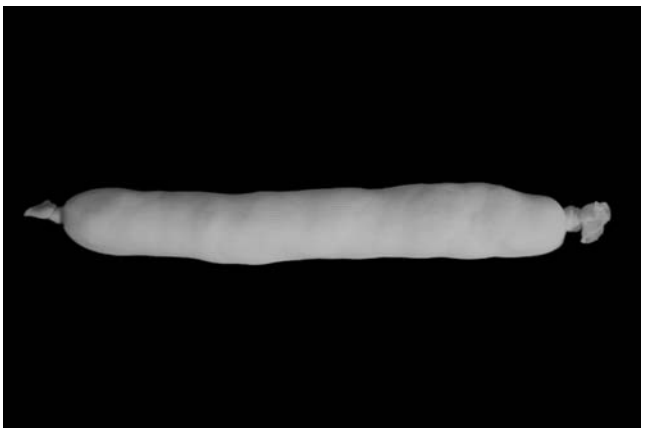

Fig. 1. Three-inch stockinette and roll cotton made into a "rectal tampon" to be used in the first aid of rectal tears.

Fig. 2. The rectal tampon is partially filled with roll cotton, lubricated, and gently inserted into the rectum.

Fig. 3. The open end of the rectal tampon facilitates filling of the stockinette with additional cotton.

the tear to prevent fecal balls from entering the defect, but in the opinion of the authors, this is less effective.

3. Results

Many investigators feel that when fecal balls are passed caudally, they will be diverted into the rectal defect. Then, they may grossly undermine the soft tissues and increase the severity of a grade III tear or possibly, make a grade III tear into a grade IV tear.

Fig. 4. The rectal tampon should be secured in place with towel clamps or a purse-string suture.

Rectal packing has been suggested to improve the chances of survival in horses with rectal tears and was shown to delay progression of rectal injuries in horses.[3]

Horses with rectal tears were reported to have better chances of survival if early referral and appropriate first aid measures were applied.[4]

4. Discussion

If the circumstances surrounding a rectal tear include sound medical judgment and appropriate first aid measures, it is very unlikely that a veterinarian would be deemed negligent. It is not appropriate to blame oneself in these instances, and the practitioner should not inform the owner that the practitioner's insurance will likely cover the referral costs or the replacement cost of the horse, because if negligence did not occur, it is unlikely that costs will be paid. Malpractice providers do not pay on bad luck, only on negligence. Records describing the circumstances of the injury and all communications should be made immediately. Owners should be informed that this is considered a "hazard of the trade," that many feel an inherent weakness in the rectal integrity may be a precipitating factor, and that prompt referral should happen to maximize a successful outcome. Frequently, clients are won over not only by how the case is handled when there is a good outcome but how they are managed when there is a less than favorable outcome.

With appropriate first aid, even more serious tears carry a favorable prognosis.[4] The practitioner should contact a referral hospital for their specific recommendations and describe the circumstances surrounding the injury. Remember the tenet that rectal tears do not kill horses, but rather, it is the fecal material in the abdomen that is responsible for deaths.

References and Footnotes

1. Luo T, Bertone JJ, Greene HM, et al. A comparison of N-butylscopolammonium bromide and lidocaine for control of rectal pressure, in *Proceedings.* 51st Annual American Association of Equine Practitioners Convention 2005;191–194.
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[a]Richard Shirbroun. Personal communication, 2008.
[b]Buscopan Injectable Solution, Boehringer Ingelheim Vetmedica, St. Joseph, MO 64506.