

# Surgical Repair of Recto-Vaginal Tear from Dystocia in a Thoroughbred Mare: A Case Report

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**R**ectovaginal fistula (RVF) is an abnormal communication between the rectum and vagina, often resulting from foaling trauma in mares, such as dystocia caused by malpositioned foals (Pooniya *et al.*, 2019). The injury is seen predominantly in primiparous mares and is usually due to violent expulsive efforts by the mare (Colbern *et al.*, 1985; Turner and McIlwraith, 1989). This condition risks reproductive tract infections, potentially impairing fertility, a critical concern for Thoroughbred breeding farms (LeBlanc, 2010). In India, where Thoroughbreds are bred under live-cover regulations and tropical conditions, RVF management is vital to minimize economic losses (Scoggin *et al.*, 2015). Surgical repair, typically using layered suturing, is the standard treatment, with reported high success rates (Easley, 1988; Jalim and McKinnon, 2010). This case report describes the successful surgical correction of a recto-vaginal tear in a primiparous Thoroughbred mare from stud farm, Karnataka, aiming to highlight effective management strategies and their relevance to India's equine industry.

## CASE HISTORY AND OBSERVATIONS

A five-year-old primiparous Thoroughbred mare from a stud farm in Kunigal, Tumakuru District, Karnataka, was presented with a complaint of dystocia. The foaling attendant reported prolonged straining, and initial examination revealed the foal's left forelimb protruded from the rectum. Per vaginal examinations revealed an almost 6-7 cm vagino-rectal tear on the dorsal commissure of vagina anterior to the anal sphincter, through which the foal's limb had passed, causing the dystocia. The mare's vital parameters were stable. The foal's limb was manually repelled into the vagina, relieving the dystocia. Immediate surgical repair was planned to prevent faecal contamination of the reproductive tract.

## TREATMENT AND DISCUSSION

Surgery was performed under sedation (Xylazine HCl 2% @ 0.5 mg/kg IV and Butorphanol @ 0.02-0.1 mg/kg IV) and regional anaesthesia (epidural block with 2% lignocaine hydrochloride @ 0.2 mL/kg). The mare was positioned in stocks, and the perineal area was aseptically prepared. The rectal tear margins were debrided, and a two-layer suture

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pattern was followed through per vaginal approach (Fig. 1). First layer of interrupted sutures with No. 0 polyglactin (antibacterial with triclosan absorbable polyglactin, MITSU AB<sup>®</sup>) to appose the rectal tear without including mucosa of the rectum, and the second layer of continuous sutures with No. 1 polyglactin, to close the vaginal mucosa. The site was flushed with liquid oxytetracycline post-closure to minimize infection risk.

Post-operatively, the mare received procaine penicillin (22,000 IU/kg IV) and Gentamicin (6.6 mg/kg IV) twice daily for 5 days, and flunixin meglumine (1.1 mg/kg IV), once daily for 3 days to prevent infection and manage pain. Her diet changes included grass hay to ensure soft faeces, reducing suture strain. The perineal area was cleaned daily with liquid oxytetracycline and povidone-iodine ointment was applied on suture line. Monitoring included routine checks for suture dehiscence, infection, faecal consistency, or straining. By day 14 post-surgery, the surgical site had healed completely, with no fistula recurrence. The mare resumed normal activities, and ultrasonography confirmed a healthy reproductive tract. Follow-up breeding was planned for the next season to assess fertility.

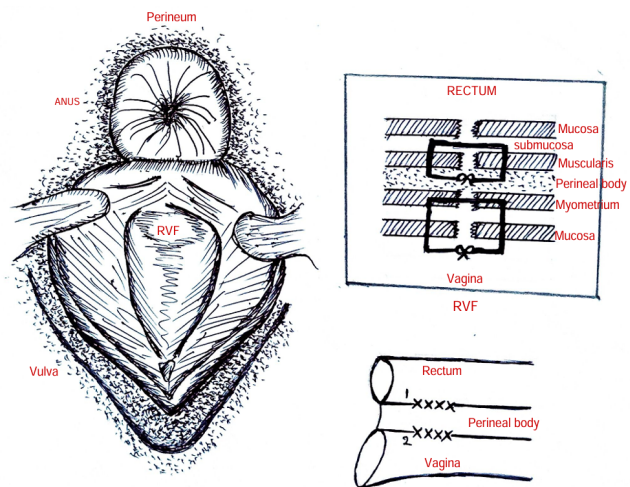
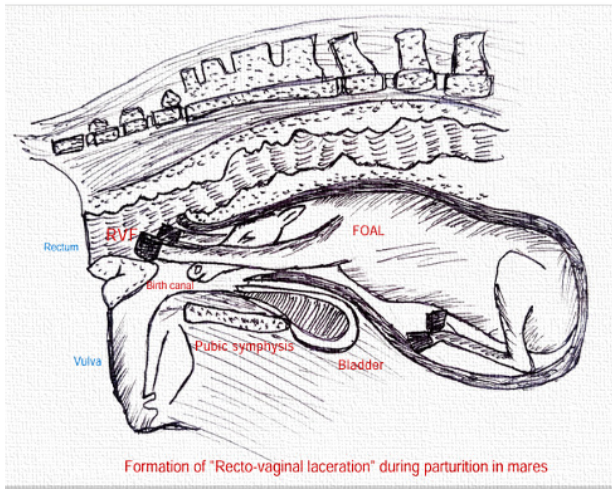


Fig. 1: Surgical repair of recto-vaginal fistula in a recently foaled mare.

Recto-vaginal fistulas in mares, often caused by foaling injuries like a malpositioned foal's limb perforating the recto-vaginal septum (Pooniya *et al.*, 2019) was effectively repaired in this case using a two-layer suture technique with interrupted rectal and continuous vaginal sutures, known for preventing faecal leakage and promoting healing (Easley, 1988; Schönfelder and Sobiraj, 2004). In contrast, Jalim and McKinnon (2010) achieved success with a three-layer transrectal approach, while Pooniya *et al.*, (2019) used a single-layer per vaginal Goetz six-bite suture pattern. Immediate surgical intervention, despite recommendations for a 3-4 week delay, proved successful due to minimal inflammation and high contamination risks, aligning with findings on acute repairs (Jalim and McKinnon, 2010). For Thoroughbred mares, fertility preservation is key, with Jalim and McKinnon (2010) reporting an 87% conception rate post-rectal tear repair, though long-term fertility data are pending (Scoggin, 2015). Post-operative care with antibiotics and dietary adjustments prevented suture dehiscence, while alternative techniques like the vaginal mucosal pedicle flap were deemed unnecessary for this straightforward

case (Schönfelder and Sobiraj, 2004). Limitations include the single-case design and lack of long-term fertility data, warranting further research.

This case demonstrates that prompt surgical repair of rectal tear using a two-layer suture technique, combined with post-operative care, ensures recovery and supports fertility preservation in Thoroughbred mares. The findings are particularly relevant for Indian equine industry, where recto-vaginal fistula management is critical. Future research should explore long-term fertility outcomes and regional adaptations for tropical climates.

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