



Surgical management of third degree perineal laceration in young mares

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Third degree perineal laceration occurs during unassisted foaling and involves vagina and perineal body which may cause extensive tissue damage with subsequent necrosis. The surgical repair of third degree perineal laceration is delayed at least 4–6 weeks after injury (Phillips and Foerner 1998). The repair may require 2 or more surgical attempts for successful outcome. The present study was conducted with an aim to repair third degree perineal laceration under general anesthesia using 2 stage technique.

Mares (6) suffering from third degree perianal laceration that were presented to the Veterinary Teaching Hospital for treatment (Figs 1, 2) were used in the study. The diagnosis was confirmed on the basis of history of difficult parturition and physical examination of the lacerated tissue. Initially, at the time of presentation the wound was dressed with soframycin and lignocain jelly (2%) and systemic antibiotic ampi-cloxacillin (10mg/kg) was given for 7 days. The surgical repair was attempted after 6 weeks of initial trauma. Mares were kept off feed for 24 h. Anesthesia was induced with xylazine (1 mg/kg B.wt) and ketamine (2 mg/kg B.wt) combination by intravenous administration. After endotracheal intubation anesthesia was maintained with 2% isoflurane and oxygen mixture.

The first stage repair was done after 6 weeks of original injury. For this purpose, scar tissue formed at recto-vaginal junction was exposed. Incision was made along the scar tissue margins, extending from wall formed by the intact rectum and vagina. Vaginal and rectal walls were dissected and separated. Vaginal roof reconstruction was carried out using Vicryl thread No. 2 with simple interrupted sutures starting from far end of the vaginal laceration (Fig. 3). Two ends of vaginal laceration apposed and reconstruction of vaginal roof

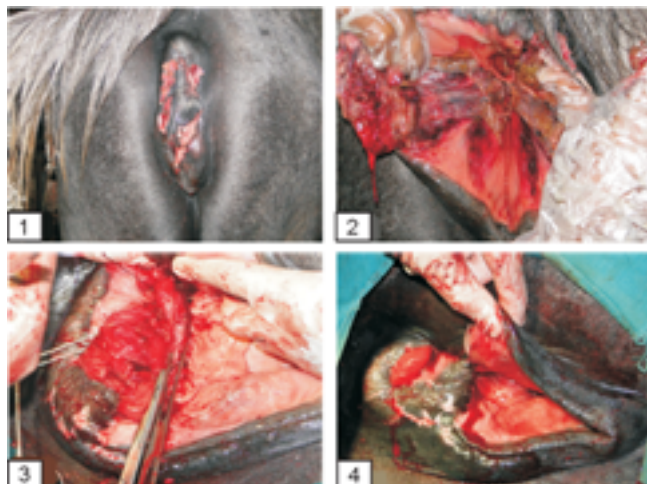
was completed. Similarly rectum was repaired separately.

In the second stage, reconstruction of perineal body was done after 6 weeks of first stage repair by freshening the newly formed epithelial tissue at the perineal body in a perineal body were repaired by applying simple interrupted sutures using Vicryl No. 2. The external skin was closed using no. 1 polyamide in simple interrupted fashion. All the mares were given ampicillin-cloxacillin combination (10 mg./kg B. wt IM) for 7 days and Gentamicin (4 mg/kg B. wt IM) for 3 days and Melonex (0.2 mg/kg B. wt IM) for 3 days after both the stages of surgical repair. Mares were also given laxative diet and liquid paraffin orally for 7 days to loosen the fecal contents.

In 4 out of 6 mares surgical repair of third degree laceration healed successfully without any significant complications. Out of 2 remaining mares, one developed partial wound dehiscence that eventually recovered after third surgery. In other mare surgery was unsuccessful even after third attempt. Complete recovery was seen in 5 (83.3%) out of 6 mares. Three mares later delivered healthy foals and no recurrence was observed. Perineal laceration in mares occur during unassisted foaling, usually in primiparous mares due to the strong expulsive forces applied by the mare in the act of foaling (Kazami *et al.* 2010, Dabas and Sharma 2011). The repair of third degree peineal laceration is done at least 4–6 weeks after trauma (Leblanc 1991, Desjardins *et al.* 1993, Woodie 2006). Immediate repair is rarely indicated (Delahanty 1968). Rectovaginal laceration are most commonly repaired either by one stage technique or with two stage technique or by slight modification of the technique. The aim of two stages technique is to reduce straining and subsequent tearing of the tissue. In the present study the two stage technique was applied in modified form.

To avoid straining on suture line after surgery many surgeon prefer keeping the animal fasted for up to 5 days pre-operatively and for 9 days post-operative (Aanes 1988, Hospes and Bleul 2007). In the present study, the Mares were fasted pre-operatively only for 24 h for general anesthesia and no post-operating fasting was done. But diet was

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Figs 1–4. 1. Photograph showing external vulvar and perineal body injury in a mare after difficult foaling. 2. Photograph showing severe internal injury to rectum and vaginal wall leading to third degree perineal laceration. 3. Suturing of vaginal wall for reconstruction of vaginal floor during first stage repair of third degree perineal laceration. 4. Perineal body after surgical reconstruction immediately after second stage surgical repair.

modified and liquid paraffin was fed to soften the fecal output. There are multiple complication reported in literature for the repair of third degree perineal laceration in mares. These include recto-vaginal fistula formation, urine pooling, complete dehiscence of the repair, constipation, tenesmus, or reduced performance (Kazami *et al.* 2010). In the present study two mares showed complication of wound dehiscence. One Mare recovered after third attempt of surgery but in other mare surgical repair failed after multiple attempts and was euthanized on owner's request. However, Kazami *et al.* (2010), did not report any complication in the seven mares repaired for third degree perineal laceration using one stage Goetz technique.

Delayed reconstruction of the perineal body also avoid reduction in the size of rectum, minimize the accumulation of feces (Hospes and Bleul 2007). Mares after repair may get perineal laceration in subsequent foaling (Kasikci *et al.* 2005, Belknap and Nickels 1992). In this study three mares foaled successfully and did not show any recurrence of perineal laceration at time of next foaling. Jalim and Mckinno (2010) achieved excellent fertility following recto vaginal fistula. In conclusion, third degree laceration can be successfully treated using two stage method of repair with reasonably good fertility.

SUMMARY

Study was conducted on mares (6) suffering from third degree perineal laceration. Surgical repair of third degree perineal laceration was done in two stages after six week of initial injury under general anaesthesia and in lateral

recumbency. For surgical repair incision was made along the line of scar tissue formed at recto-vaginal junction. Vaginal and rectal walls were separated. Vaginal roof reconstruction was carried out using Vicryl thread No. 2 with simple interrupted sutures. Two ends of vaginal laceration apposed and reconstruction of vaginal roof was completed. Rectum was repaired separately. The surgical wound was allowed to heal for 4–5 weeks which was followed by second stage reconstruction of perineal body. In four out of six mares surgical repair of third degree laceration healed successfully without any significant complications. One mare developed partial wound dehiscence and eventually recovered after third surgery. But, in the other mare even third surgery was unsuccessful.

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