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## Correction and management of rectal prolapse in indigenous goat: A case report

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### Abstract

A goat with the history of bright red colour cylindrical mass of dark, congested, friable tissue protruding from the anus was presented as an emergency case in the field. The case was diagnosed as rectal prolapse. The prolapsed mass was disinfected with potassium permanganate solution, smear with liquid paraffin, replaced in its normal position and purse-string suture was applied. The case was followed up for five days and treated with antibiotic and analgesic. Uneventful recovery of animal was observed.

**Keywords:** Goat, rectal prolapse, purse-string suture

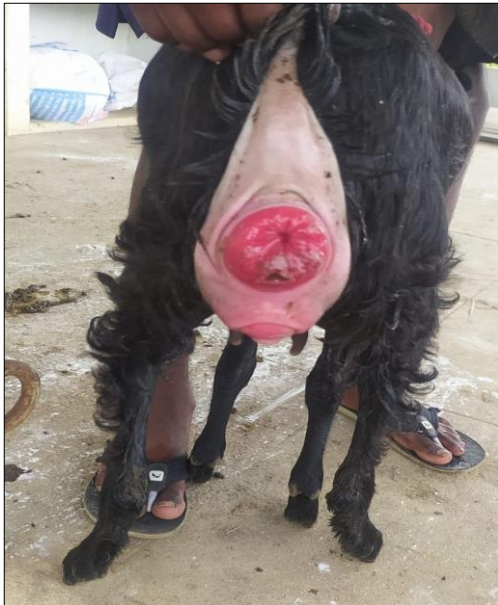
### Introduction

In rectal prolapse, one or more layers of the rectum protrude through the anus due to persistent tenesmus associated with intestinal, anorectal, or urogenital disease. Prolapse may be classified as incomplete, in which only the rectal mucosa is everted, or complete, in which all rectal layers are protruded (Chakrabarti, 2004) [3]. Rectal prolapse may be predisposed by conditions that increase intrapelvic pressure or abdominal straining, such as persistent riding behaviour, coughing, coccidiosis, and chronic diarrhoea (Radostits *et al.*, 2009) [7]. Vaginal prolapse in females and urinary tract obstruction in males may also predispose to rectal prolapsed (Roberts, 1986) [8]. Any partial, intermittent prolapse may lead to rectal mucosal injury and irritation, more straining, and eventually complete prolapsed (Arthur *et al.*, 1996; Kumar *et al.*, 2020) [2, 6]. Animals of any age, breed, or sex may be affected. Rectal prolapse is probably the most common GI problem in pigs due to diarrhea or weakness of the rectal support tissue within the pelvis (Anderson and Miesner, 2008) [1]. In cattle, it may be associated with coccidiosis, rabies, or vaginal or uterine prolapse; occasionally, excessive "riding" and associated traumatic injury may be causative in young bulls. It is common in sheep with short tail docking and especially in feedlot lambs, in which high-concentrate rations may be causative. The use of estrogens as growth promotants, or accidental exposure to estrogenic fungal toxins, may also predispose large animals to rectal prolapsed (Tyagi and Singh, 2002) [9].

The rectal prolapse must be differentiated from prolapsed ileocolic intussusception by passing a probe, blunt instrument, or finger between the prolapsed mass and the inner rectal wall. In rectal prolapse, the instrument cannot be inserted because of the presence of a fornix. Other common signs include ulceration, inflammation, and congestion of the rectal mucosa. Shortly after the onset of a prolapse there is a short, nonulcerated, inflamed segment of rectal tissue; later, the mucosal surface darkens, hardens, and may become marked by necrosis (Gallagher, 2020) [4]. Without intervention there is a risk of peritonitis and death. Occasional cases may be seen in the livestock export process (Hanie, 2006) [5].

### Case history and Clinical observation

A goat with fourth parity (27kg BW) was presented as an emergency case in the field with the history of bright red colour cylindrical mass of dark, congested, friable tissue protruding through anus. The animal was in the standing position with the vital parameters of hyperthermia (41.2 °C) tachycardia (94 bpm) and respiratory rate 22 cycles/min according to physical examination. Clinical examination of the perineal area revealed that the protruding red mass was part of rectum. On the basis of history and clinical examination, the case was diagnosed as rectal prolapse (Fig.1).



**Fig 1:** Rectal prolapse in goat



**Fig 2:** Retention by purse-string method

Diagnosis was based on the primary clinical sign, a cylindrical tissue mass protruding from the anus. The primary clinical sign, an elongated, cylindrical mass protruding through the anal orifice, is usually diagnostic.

### Treatment and Discussion

Treatment was commenced without delay because swelling and necrosis may cause difficulty in manual or surgical correction. The treatment procedure began with epidural anesthesia was achieved by infiltration of 1 ml of 2% lignocaine hydrochloride into the epidural space of sacro-coccygeal vertebrae to desensitize perineum and prevent straining. The animal was brought to a slope area and pointing her head downhill for lowering her head than the hindquarters, which letting gravity to assist rather than hinder the replacement. The gross debris was removed from the mucosal surface by washing with potassium permanganate solution and a 0.5% povidone iodine solution was applied over the prolapsed parts to prevent contamination. Prolapse mass was smear with liquid paraffin and by careful manipulation gradually replaced in its normal position. Care was taken to avoid the reoccurrence of prolapse. Insert a loose, anal purse-string suture to prevent recurrence while leaving a two finger opening to allow passage of faeces. Remove after one week by which time swelling will have disappeared if the underlying condition has been corrected (Fig. 2). Goat was administered with fluid therapy by infusing 5% DNS (500ml). To avoid post-operative complications, an antibiotic (inj. Benzylpenicillin @ 20000 IU/kg body weight by intramuscular route), analgesic (inj. Meloxicam @ 1 mg/kg body weight by intramuscular route) and antihistamine (inj. Chlorpheniramine maleate 2.5ml i/m) were administered for three days. The owner was advised to feed the goat in divided doses. After three days purse string suture was removed and rectal prolapse not recur. The recovery of the goat went smoothly.

Exciting causes in our case is might be abdominal straining due to constipation. Constipation means the difficult or incomplete passage of dry hardened faeces. Faeces becomes harder, drier and more difficult to pass the longer it stays in the colon. This may occur in animals suffering reduced water intake, temporary food deprivation, environmental or social stress making them reluctant to defecate, disrupted dietary and management routines, or painful pelvic disease (Radostits *et al.*, 2009) [7]. Further, it can be concluded that rectal prolapse is typically the consequence of other diseases that result in significant tenesmus or is caused by nerve injury that results in anal sphincter incompetence.

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