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## A rare case of antepartum rectal prolapse in a goat and its management: A case report

**Rajesh Kumar, RP Diwakar, Ramakant, Safayat Husain and Kabir Alam**

**Abstract**

A goat with fifth parity was presented at Veterinary Clinical Complex, C.V.Sc.& A.H., ANDUAT, Kumarganj, Ayodhya (UP) with the history of bright red colour cylindrical mass protruding through anus. The case was diagnosed as class I rectal prolapse. The prolapsed mass was washed with potassium permanganate solution, smear with liquid paraffin, replaced in its normal position and truss was applied. Goat was administered with inj DNS, 500ml, i.v. once, inj Prednisolone, 2 ml, i.m. once and inj. Calcium Sandose, 20 ml, i.v. once in day for 2 days. After two days truss was removed and rectal prolapse not recur. Further, Four days after removal of truss, the goat gives birth to three kids and no recurrence of prolapse was noticed.

**Keywords:** Antepartum, goat, rectal prolapse

**Introduction**

Rectal prolapse is the protrusion of one or more layer of rectum through the anus. Prolapse of rectum can occur in all species of domestic animals <sup>[1]</sup>, commonly in pig, occasionally in cattle and rarely in goat <sup>[2]</sup> and other species <sup>[3]</sup>.

Rectal prolapse may be classified as incomplete (only rectal mucosa is everted) or complete (all rectal layers are protruded) <sup>[4]</sup>. Further, rectal prolapse may be classified as class I to IV, on the basis of tissue layer involved or by severity <sup>[5]</sup>. Based on tissue layer involvement, a Class I prolapse is mild, with only a small amount of rectal mucosa protruding intermittently. Class II prolapse is also intermittent and include all layers of the rectum. Class III prolapses include all layers of the rectum and large colon, resulting in a large prolapse and significant discomfort and straining. Class IV prolapses include rectum and large colon and are constricted by the action of the anal sphincter. Based on severity, Class I prolapses include tearing of the mucosa and submucosa. Class II include tearing of the muscular layers, whereas Class III prolapses have tearing of the mucosa, submucosa, and muscular layers, further subdivided by location of the tear. Class IV prolapses are full thickness, mucosa through serosa. Class II prolapses are the most common prolapses presented to the veterinarian for correction. Class I and II prolapses may generally be managed by nonsurgical means. Recurrent and refractory Class II and all Classes III and IV prolapses require resection.

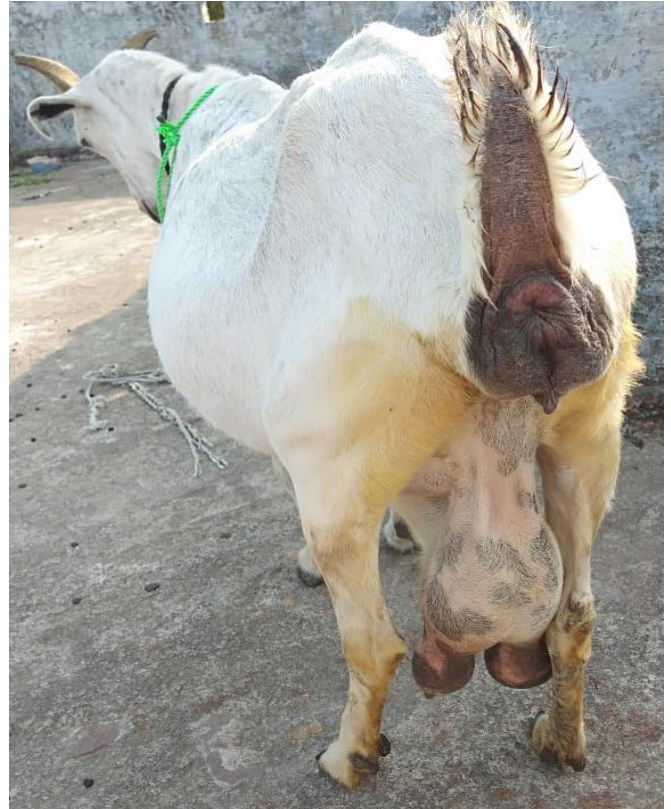
A bright red colour, elongated cylindrical mass protruding through the anal orifice is usually diagnostic <sup>[4]</sup>. However, it must be differentiated from the prolapsed ileocolic intussusception by passing a probe (blunt instrument or finger) between the prolapsed mass and the inner rectal wall. In rectal prolapse, the probe cannot be inserted because of presence of the fornix. Treatment of rectal prolapse comprises non-surgical and surgical means viz. reduction, retention (by purse string suture or use of truss) and amputation <sup>[6]</sup> respectively.

**Case history and Clinical observation**

A goat with parity five was presented at Veterinary Clinical Complex, C.V.Sc.&A.H., ANDUAT, Kumarganj, Ayodhya (UP) with the history of bright red colour cylindrical mass protruding through anus. Further history revealed that the condition arises a day back, and goat is in advance pregnancy, awaiting parturition in a week or so. Clinical examination reveals normal vital parameters and the protruding red mass was part of rectum. On the basis of history and clinical examination, the case was diagnosed as class II rectal prolapse (Fig.1).



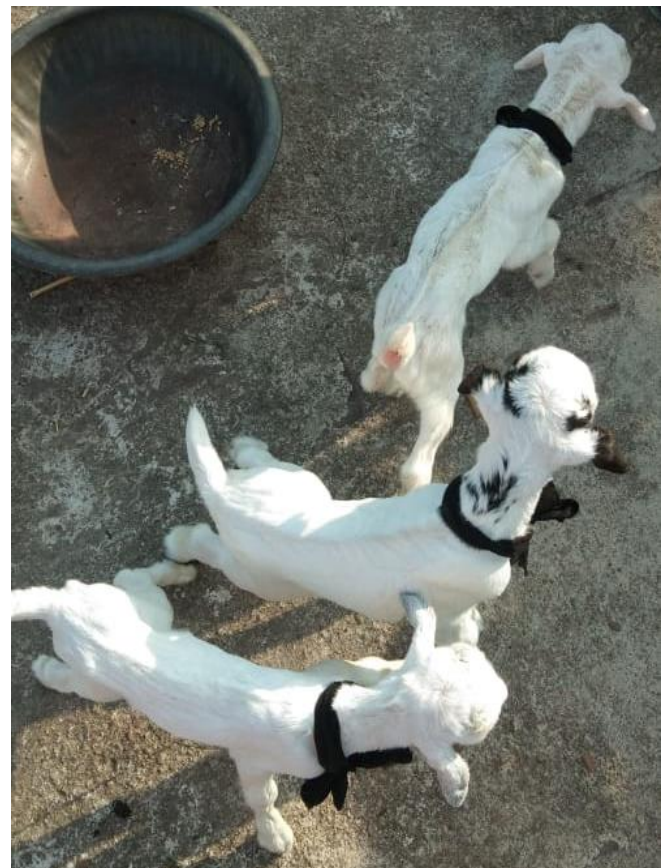
**Fig 1:** Photograph of class II rectal prolapse in goat.



**Fig 3:** Photograph of goat after correction of class II rectal prolapse.



**Fig 2:** Photograph of goat with applied truss.



**Fig 4:** Photograph of three newborn kids after successful treatment of rectal prolapse.

### Treatment and Discussion

The prolapsed mass was washed with potassium permanganate solution (1:1000). Prolapse mass was smear with liquid paraffin and by careful manipulation gradually replaced in its normal position. After replacing the prolapsed mass truss was applied over the anus (Fig.2). Goat was administered with inj DNS, 500ml by intravenous route once, inj Prednisolone, 2 ml by intramuscular route once and inj. Calcium Sandose, 20 ml, intravenous route, once in day for 2 days. The owner was advised to feed the goat in divided doses. After two days truss was removed and rectal prolapse not recur (Fig.3). Further, Four days after removal of truss, the goat give birth to three kids (Fig.4) and no recurrence of prolapse was noticed.

Any disease or condition which causes violent straining, which may be associated with tenesmus (occurs with coccidiosis, proctitis, colitis and other condition), dysurea (as a complication of cystitis, urolithiasis, urethral obstruction, dystocia, neoplasia and other condition), neuropathy, chronic coughing or genetics, increased intra-abdominal pressure<sup>[7]</sup> as in advance pregnancy, engorged pelvic organ<sup>[3]</sup>, relaxed anal sphincter<sup>[8]</sup> which might be associated with hypocalcemia<sup>[3]</sup>, perineal hernia or other interruption of normal innervations of external anal sphincter may cause prolapse<sup>[4]</sup>. Moreover, others predisposing factors are compromised function of supporting tissue of pelvis, constipation, high level of estrogen<sup>[9]</sup> as in advance pregnancy, certain feed which contain estrogen as growth promoter or access to estrogenic fungal toxins.

Exciting causes in our case is might be advance pregnancy, multiple fetuses *in utero* (both condition causes increased intra-abdominal pressure, increased inta-pelvic pressure and more placental estrogen)<sup>[9]</sup> and concurrent hypocalcemia. If there is reduced calcium intake during increased calcium requirement, usually during late geatation, particularly if animal pregnant with multiple fetuses result in low serum calcium concentration or hypocalcemia. Furthermore, greatest demand of calcium occur during 1-3 week antepartum when mineralization of fetal skeleton occur particularly when multiple fetuses are present *in-utero* hence during this period there is more chances of hypocalcemia<sup>[4]</sup>. In addition to atony of skeletal and smooth muscle other physiologic effect of hypocalcemia are ruminal stasis, secondary bloat, constipation, relaxation of anus and loss of anal reflex<sup>[8]</sup>. Further, it can be concluded that rectal prolapse in advance pregnant goat may be attributed to multiple fetuses and concurrent hypocalcemia which can be managed by non-surgical means if diagnosed and treated promptly.

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### Conflict of Interest

The authors declare no conflict of interest with this manuscript.

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