

## Surgical intervention of congenital atresia ani with dermoid cyst in a new born cross bred calf

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Received: 14.10.2021/Accepted: 24.12.2021

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### ABSTRACT

Atresia ani and dermoid cyst are an uncommon developmental anomaly usually congenital or hereditary in nature which can result from either defective genetics or from a genetic insult/agent that is associated with the fetal environment or from their interaction. Atresia ani is a congenital and emergency condition in which there is fail to open or absence of anal opening in the new born animals leading to stagnation of muconeum and faecal content. This condition compels to diagnose and plan for immediate surgical intervention to create anal opening. Surgery was done by administering epidural analgesia and the circular incisions were made. Reconstruction of anal opening was done by suturing it to peri-anal wall. Antibiotics were given post-operatively for 5 days and the sutures were removed on 10<sup>th</sup> day. Calf showed normal faecal output and made an uneventful recovery. The main objective of this study was to report atresia ani with severe unilateral corneal dermoid in a cross bred calf and its therapeutic measurements.

**Keywords:** Surgical intervention; atresia ani; dermoid cyst; cross bred calf

### INTRODUCTION

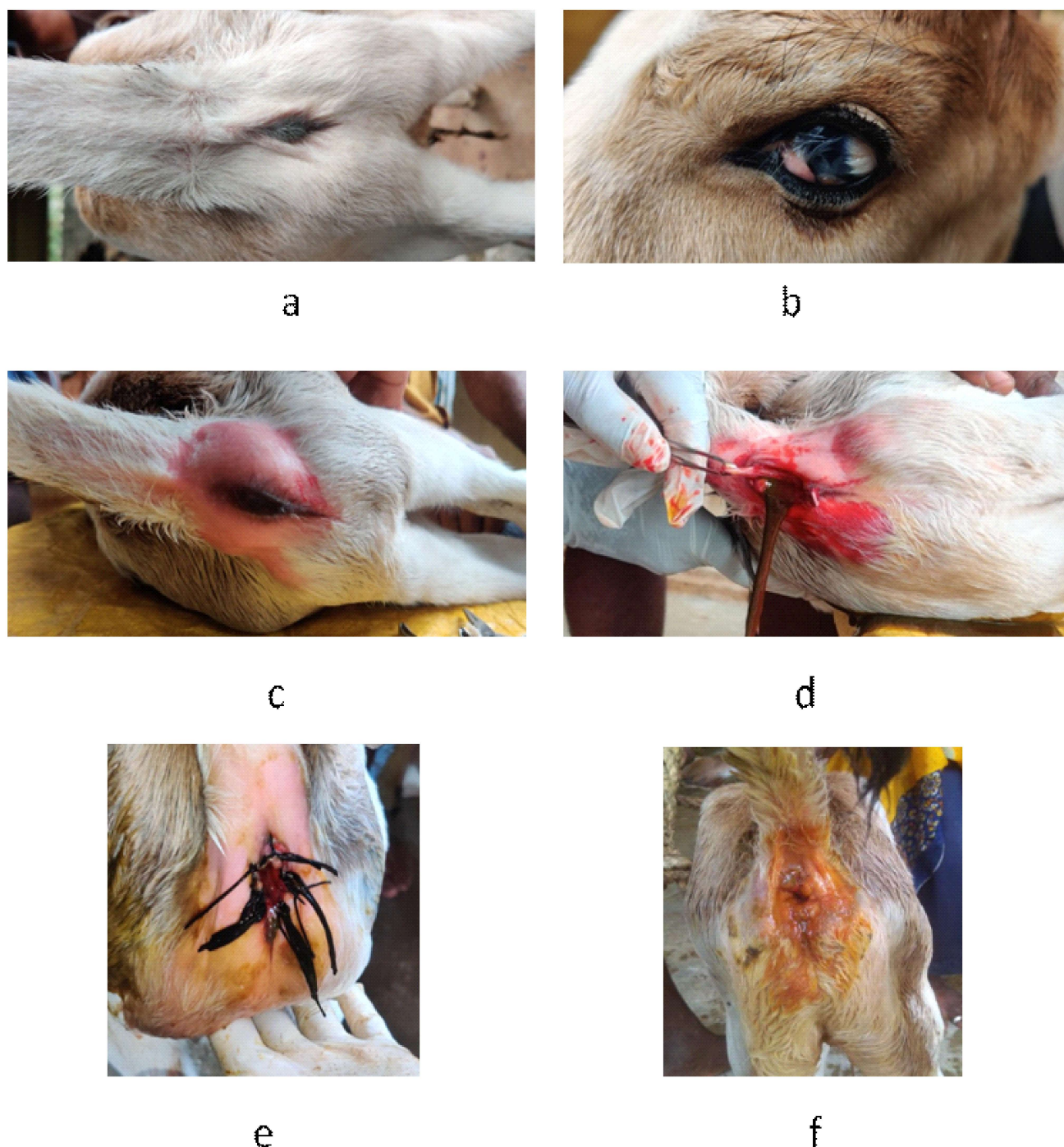
The prevalence of atresia ani is reported as a common congenital condition in all domestic animals (Gaag and Tibboel 1980). The animals with this condition generally appear with small anal openings or no openings at all. It is also reported that this congenital condition is likely transmitted genetically or is associated with other congenital abnormalities. Imperforate anus is the general term used for this type of condition since the animal is unable to pass the faecal material through anus. Reports say that atresia ani is encountered mostly in male calves and pigs. Veterinarians usually can diagnose this condition shortly after birth (Nixon 1972, Dreyfuss and Tullener 1989). Ocular dermoid (Fig 1b) is a skin or skin-like appendage usually arising on the limbus, conjunctivae and cornea that may be unilateral or bilateral and associated with other ocular manifestation or with other malformations. Dermoids may affect the eyelids, conjunctiva, nictitans, sclera and cornea and are most commonly present unilaterally. Ocular dermoids are rare in cattle with the prevalence estimated between 0.002 and 0.4 per cent.

### MATERIAL and METHOD

A two-day old calf was presented with the complaint of no passage of faeces since birth with unilateral ocular dermoid cyst. On clinical observation the obvious symptoms appeared with no anal opening (Fig 1a), distension of abdomen, dull and depressed and white hair growth over cornea with continuous tear secretion. The signs of tenesmus and abdominal pain were also observed. After proper observations the case was diagnosed as atresia ani condition and unilateral dermoid cyst. The calf was prepared for immediate surgical intervention of atresia ani.

#### Treatment

The calf was prepared for surgery and was controlled in dorso-ventral position. The perineal region was shaved and prepared for aseptic surgery (Fig 1c). Two per cent lignocaine Hcl epidural analgesia was administered. The abdomen was compressed so the bulging in anal region was observed. A circular incision was made on the prominent bulge area of anus and the incised skin was removed. Free flow of muconium was established (Fig 1d). Then the muconium was



**Fig 1.** Atresia ani condition and unilateral dermoid cyst a) Absence of anal opening, b) Dermoid cyst over cornea, c) Bulging of perianal region, d) Free flow of muconium, e) Application of interrupted sutures, f) Recovery and permanent anal opening after 10<sup>th</sup> day

evacuated and the patency was maintained by the application of interrupted sutures between rectal mucosa and skin by black braided silk to withhold the permanent anal orifice (Fig 1e). Post-operatively antibiotic cefotaxime was administered at the rate of 10 mg/kg. Since the calf was around 25 kg, 250 mg was injected intravenously for up to 5 days. It was

advised to use paraffin laxative. The sutures were removed on the 10<sup>th</sup> post-operative day (Fig 1f).

## RESULTS and DISCUSSION

The calf showed normal defecation on the 7<sup>th</sup> post-operative day. Mostly affected calves stand still

and suckle normally and the abnormality is found during 1 to 3 days after birth. Visual observation of the calf is the only procedure to diagnose this condition. Considering dermoid cyst, it is not an emergency case and surgery is planned to do later. Other than atresia ani, atresia recti is also a congenital condition of the abdomen found in calves. Similar findings were also reported by Steenhaunt et al (1976) and Nagaraja et al (2003). Surgical intervention is the only treatment procedure for such conditions and it was attempted successfully in the present case.

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