

## SURGICAL MANAGEMENT OF *ATRESIA ANI ET RECTI* WITH CONGENITAL ABSENCE OF TAIL (ANURY) IN A MALE BUFFALO CALF

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### ABSTRACT

A day old male buffalo calf was presented with complaints of abdominal straining and lack of defecation. On examination it was found that the calf had no tail with blunt posterior sacral margin and absence of anal opening. The case was diagnosed as congenital anury with *atresia ani et recti*. Cruciate incision was made at the anal area to create an anal opening by sedating the animal with 0.1 mg/kg of xylazine administered intravenously and under local infiltration with 2% lidocaine which facilitated passing of plenty of meconium. Surgical wound was closed in simple interrupted pattern with nylon. The animal was administered ceftriaxone for 5 days, meloxicam for 3 days and antiseptic dressing with HIMAX ointment had an uneventful recovery.

**Keywords:** anury, *atresia ani at recti*, buffalo, congenital, *Bubalus bubalis*

### INTRODUCTION

The congenital abnormalities of the anus and rectum are fairly common in young ones (Dreyfuss and Tulleners, 1989) but congenital

taillessness is a rare defect described in cattle (Lotfi and Shahryar, 2009; Debasis and Mousumi, 2010) and even in other domestic animals (Dunn, 1925; Dunn *et al.*, 1942; Mahmood *et al.*, 2001; Debasis and Mousumi, 2009; Hytonen *et al.*, 2009). Anwar and Purohit (2012) reported that congenital anury with atresia ani rarely occurs in camels and surgical correction of atresia ani is mandatory. In the present report we describe a case of anury in a male buffalo calf born with *atresia ani et recti* and its surgical management.

### CASE HISTORY

A day old male buffalo calf was presented with a complaint of inability to pass feces with signs of abdominal pain and recurrent inclination to evacuate the bowels. Detailed examination of the calf revealed absence of tail and anal opening (Figure 1) with no sign of urinary incontinence. There was no evidence of presence of tail and the posterior sacral margin was blunt. Both the dam and sire of the calf were reported to have normal tail. Gross and physical examination confirmed the case as *atresia ani* with taillessness congenital abnormality.

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## SURGICAL TECHNIQUE

Surgical management for repair of atresia ani was planned and the calf was sedated with xylazine at a dose rate of 0.1 mg/kg body weight (IV) and was controlled in sternal recumbency. The perineal area was prepared for aseptic surgery by scrubbing with povidone iodine. Local infiltration analgesia was achieved with 2% lidocaine hydrochloride at the proposed site of incision. A cruciate skin incision was made over the anus area (Figure 2) and careful dissection was carried out avoiding adjacent muscles to reach up to rectum. The blind end of anal canal was identified, secured and dissected carefully with scissors facilitating flowing out of meconium (Figure 3). Following decreased flow of meconium, the cut edges of the rectal mucosa was sutured with the skin all around in simple interrupted pattern using nylon suture keeping the knot outside (Figure 4).



Figure 1. Caudal end of calf with *atresia ani et recti* along with anury.

## POST-OPERATIVE CARE

The surgical wound was cleaned and dressed regularly with HIMEX ointment. Ceftriaxone was administered at a dose of 5 mg/kg for 5 days intramuscularly, to prevent infection. Meloxicam was administered as an anti-inflammatory drug at a dose of 0.2 mg/kg for 3 days intramuscularly. Skin sutures were removed on the 10<sup>th</sup> post-operative day and the calf recovered uneventfully (Figure 5).

## DISCUSSION

Tail abnormalities are sometimes associated with rectal adhesions and excretion difficulties (Mahmood *et al.*, 2001; Debasis and Mousumi, 2009). The taillessness condition has been known to have a hereditary or congenital origin (Kilic, 2004). In cattle most tail defects are considered to have genetic origins (Schalles and Cundiff, 1999; Belge *et al.*, 2000) and these



Figure 2. Cruciate skin incision.



Figure 3. Free flow of meconium established.



Figure 4. After reconstruction of *atresia ani at recti*.



Figure 5. 10<sup>th</sup> post-operative day after suture removal.

abnormalities mostly appear in the process of crossing different breeds (Hills, 1997; Bahr and Distl, 2005).

Atresia ani is also considered a defective development that is sex linked in sheep (Dennis and Leipold, 1972) and due to an autosomal recessive gene in pigs (Harkin *et al.*, 1982). The cause of anomalous development may occasionally be obvious but more often is obscure because of its multifactorial nature (Rosseaux and Ribble, 1988).

The reason for anury in the present case could not be ascertained as the male of the calf had not sired similar calves previously. The probability of occurrence of anury in female calves is twice than that in male calves (Lotfi and Shahryar, 2009). However; the sex of the buffalo calf reported in the present study having anury along with *atresia ani at recti* was male. Defects of the rectum such as atresia ani may occur with anury (Mahmood *et al.*, 2001; Debasis and Mousumi, 2009; Varghese *et al.*, 2010). Surgical management of *atresia ani et recti* involve surgical excision followed by reconstructing a mucocutaneous junction (Suthar *et al.*, 2010; Varghese *et al.*, 2010). The healing was uneventful and the calf had no subsequent problem. It is reported that congenital anury with *atresia ani et recti* rarely occurs in buffaloes and surgical correction of atresia ani is mandatory.

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