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SURGICAL MANAGEMENT OF CONGENITAL CYST AT TAIL BASE AND CONCURRENT ATRESIA ANI IN A GRADED MURRAH BUFFALO CALF

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ABSTRACT

Congenital defects in calves were not uncommon. A two-day old, graded Murrah male calf presented with a huge swelling and absence of anal opening was diagnosed as congenital cyst and atresia ani upon close clinical examination. Under epidural anaesthesia and sedation, the cyst was surgically removed, and a new anal opening was created following standard surgical procedure. By good post operative care and management, the calf recovered uneventfully.

Keywords: *Bubalus bubalis*, buffaloes, graded Murrah male calf, congenital cyst, atresia ani, reconstructive surgery

INTRODUCTION

Congenital disorders in calves were not uncommon and had an incidence rate of 4.3% (Leipold *et al*., 1972). Various congenital disorders like arthrogryposis (Prasad *et al*., 2010), atresia ani with recto-vaginal fistula (Kamalakar *et al*., 2015), cleft palate, meningocoele and achondroplasia, recto-cystic fistula, taillessness and hypospadias (Singh *et al*., 1993) were reported earlier. Atresia ani is congenital absence of anus and might be associated with other defects like recto-vaginal fistula, cleft palate, *etc*. Congenital cysts like meningocoele (Singh *et al*., 1993), branchial cyst (Lee *et al*., 2010) and lower eyelid cyst (Bharti *et al*., 2014) was also on record, and all these congenital defects were supposed to be resultant of autosomal recessive gene (Bademkiran *et al*., 2009). Surgical intervention was only option to correct many of these abnormalities (Kamalakar *et al*., 2014).

CASE HISTORY AND OBSERVATIONS

A two-day old graded murrah male calf was presented to large animal out-patient ward NTR College of Veterinary Science, Gannavaram with history of huge swelling at base of tail (Figure 1) and absence of anal opening (Figure 2). Needle aspiration of the swelling revealed clear, mucoid cystic fluid (Figure 3). The case is confirmed as congenital cyst associated with atresia ani. All the physiological parameters were within normal range.

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Figure 1. Photograph showing huge congenital cyst at tail base.

Figure 2. Photograph showing absence of anal opening after lifting the cyst (yellow arrow).

Figure 3. Photograph showing cystic fluid on needle puncture of the cyst.

Figure 4. Photograph showing elliptical incision around base of cyst.

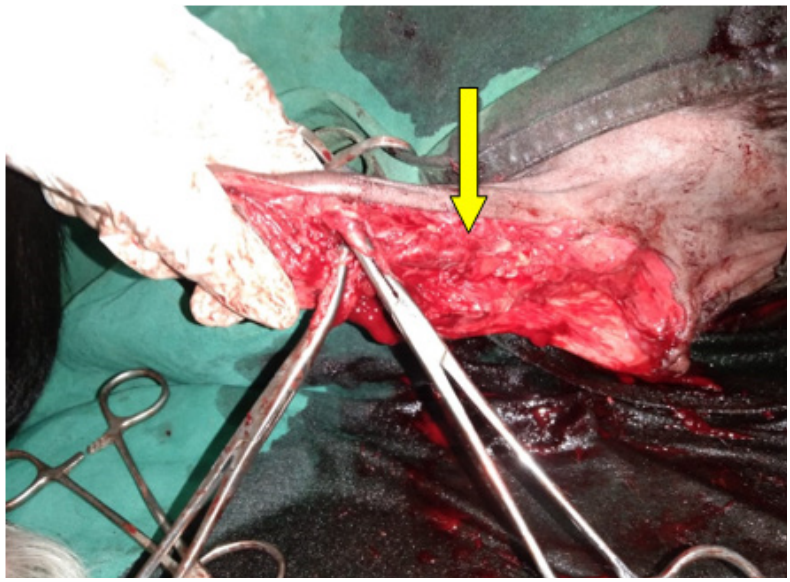

Figure 5. Photograph showing surgical site after cyst excision and haemostats in place. Note the ano-rectal bulge (yellow arrow).

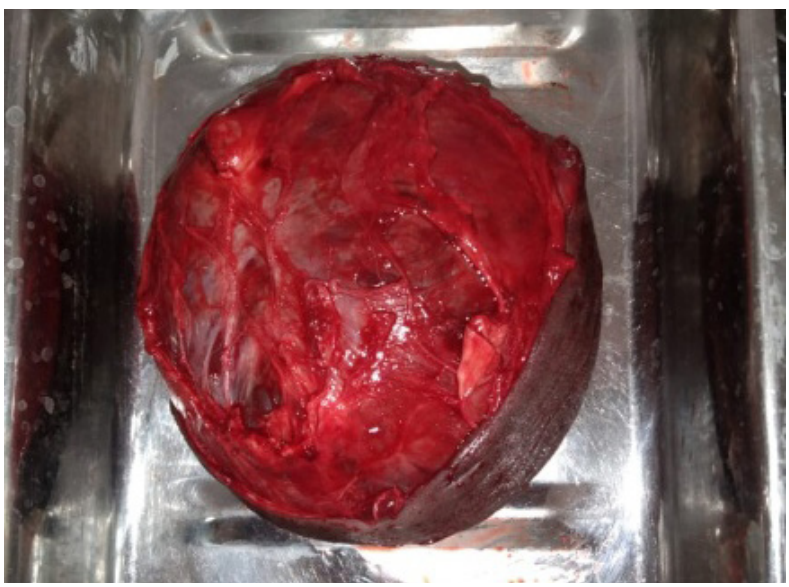

Figure 6. Photograph showing excised whole cyst.

Figure 7. Photograph showing sutured cutaneous incision and inserted cut barrel in reconstructed anus.

TREATMENT AND DISCUSSION

The calf was sedated with xylazine hydrochloride 0.01 mg/ kg BW and 1 ml of lignocaine hydrochloride was injected epidurally and restrained in right lateral recumbency. The area around the base of cyst was prepared asceptically. An elliptical incision was made around base of cyst (Figure 4), carefully undermined and separated the cyst as a whole (Figure 5). Bleeders were arrested by haemostats (Figure 5) and ligation by using chromic catgut no.0. Subcutaneous sutures were placed with chromic catgut No. 1 and skin sutures using polyamide black no. 0 in horizontal mattress pattern. It was identified to be originating from the inter-coccygeal spaces of tail base.

The ano-rectal bulge could be identified after excision of cyst (Figure 5) and made a nick incision over it. The incision was extended, and the rectal mucosa was sutured to the surrounding skin. Multiple interrupted sutures in circular fashion were placed to fix the mucosa to skin using polyamide black no. 0. A cut barrel of the 10 ml syringe was inserted into rectum, and its wings were sutured to the rectal skin at 3^{o} clock and 9^{o} clock position (Figure 7). Post operatively it was administered with inj. Ceftriaxone 10 mg/ kg BW and inj. Meloxicam 0.2 mg/ kg BW for five days along with alternate day dressing. The cut barrel and the sutures were removed on 14^{th} post operative day and the calf recovered uneventfully.

Congenital defects in calves that necessitate the surgical manoevoure were rare. Among these, reconstructive surgeries for atresia ani (Kamalakar *et al*., 2014), contracted tendons (Rashmi *et al*., 2018) were performed successfully. Diagnosis of cyst is very easy by palpation and aspiration of the contents (Lee *et al*., 2010).

Bharti *et al*. (2014) reported successful surgical management of a congenital peri-ocular cyst in a buffalo calf. The authors sedated the calf with xylazine hydrochloride 0.01 mg/ kg BW and local infiltration with lignocaine hydrochloride similar to us. The whole cyst was carefully separated (without rupturing it or draining cystic fluid) from the tail base by careful dissection as described by Lee *et al*. (2010) in surgically excising a congenital cervical bronchogenic cyst. The ano-rectal bulge could be visualized after excision of cyst only. Later the reconstructive surgery was followed as per the description of Kamalakar *et al*. (2015). The cut barrel of the 10 ml syringe maintained the anal patency and prevented the anal closure during wound contraction.

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