



Atresia Ani: A Congenital Defect & Its Successful Management in Non-Descript Calf

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Abstract

A case of perineal congenital defect (atresia ani) has been reported in non-descript calf and its successful management through surgical intervention.

Key words: Atresia ani, congenital defect and Non-descript calf.

Introduction

Congenital defects, abnormalities of structure or function present at birth, may be caused by genetic or environmental factors, or a combination of both; in many cases, the causes are unknown. The most common bovine environmental teratogens include toxic plants consumed by the dam and maternal-fetal viral infections during gestation. Congenital malformation sometimes leads to perinatal mortality, and it may also decrease maternal productivity and reduce the value of the defective neonates. Severe defects result in abortion of the calf or a return to service of the calf and cow. Congenital anomalies have been estimated to occur in 0.2%–5% of calves¹. Atresia ani, (imperforate anus) is a congenital abnormality characterized by persistence of the anal membrane resulting in a thin membrane covering the normal anal canal or is the failure of the anal membrane to break down⁸. Mereiet *al.*⁷ reported most congenital malformations was atresia ani and most frequently encountered in male calves and pigs. This report communicates a case of atresia ani in male calf, which was successfully treated by surgical intervention.

Case history and Clinical observations

A two day old male, non-descript cattle calf was presented at Veterinary Dispensary, Dhanpur, Dist: Dahod, Gujarat (India) with the history of non – passage of faeces since birth. After birth, calf was stand and suckle normally but weak. On clinical observation, closely find with principal clinical signs of dull, depression, anorexia, attempt of defecation and mild abdominal distention. Also the signs of tenesmus and abdominal pain were observed but does not voided out the faeces. The case was diagnosed as atresia and handover for surgical intervention.

Treatment and Discussion

The calf was controlled in dorso-ventral position with its hindquarter raised high from the ground to minimize the staining during operation and restrained properly to immobilize. The perineal reconstruction below the tail was prepared for aseptic surgery. Local infiltration anesthesia was performed by using injection 2% lignocaine hydrochloride (Zylocaine, LaboratePharmaceuticals Ltd., Ahmedabad, India) solution at the proposed site of incision. In present

case, abdomen was compressed initially and developed a bulge at the perineal area. Then the circular incision was made upon the bulge of the anus and the circular piece of incised skin was removed. The rectum was exposed after dissection of the perineal muscles therein and mild bleeding was occurring. The blind end of the rectum was brought to the level of anal sphincter (at incised skin) and fixed to the perineum after duly snipping the tip of the blind end of rectum meant for evacuation of the contents (muconium). This was done by putting four stitches (dorsally, ventrally and laterally on both sides). The circumference of the rectal opening was sutured by application of interrupted sutures by using black braided silk # 2 between rectal mucosa and skin to make a permanent anal orifice and calf was stand normally with minimum tenesmus immediate after surgery (Figure). Post-operatively, Gentamicin@3ml for 5 days and Meloxicam@2ml for 3 days were administered intramuscularly, followed by routine dressing with liquid Metrodin and application of fly repellent ointment (Gamacen veterinary cream, Centurian Laboratories Pvt. Ltd., Baroda) at the operative site till recovery. The sutures were taken off on 11th day post-operatively.



Figure: Perineal reconstruction (atresia ani) & Calf stand with minimum tenesmus immediate after surgery

Congenital defects and abnormalities presented in this study were recorded as sporadic cases and it may be due to genetic or environmental forces, or a combination of both, during the process of embryogenesis¹⁰. Affected calves initially will stand and suckle normally after birth. The time to onset of clinical signs of disease may vary from 1 to 3 days. On collection of history of the owner did not see the calf passing the muconium or faeces was the main observation. The principal clinical signs of present case were straining, colic, tenesmus, depression, anorexia with moderate abdominal distention and not passing meconium. Atresia

an simply can be diagnosed by visual inspection of anal opening at perineal region or by limited digital palpation if a vestigial anal opening is present¹³. If, calf suffering with condition atresia ani needed immediate surgical intervention³ which improve body weight gain and reduce economic losses caused by the fact.

The calf showed marked improvement in defecation with minimum tenesmus and active in nature within 3rd day of surgery and unevenful recovery occur within 11th post operative day. Four major types (type – I, II, IIIa&IIIb and IV) of intestinal atresia have been described by Rahaletal.¹¹. Atresia ani is a type I atresia in which the mucosal blockage within the intestinal lumen. The present case of atresia ani of intestinal atresia is the simple form of agenesis without involving the other parts and similar findings in calves^{12,13} and in kid^{5,12} were reported. Some authors^{2,4,6,9} reported that the most anomalies of digestion system were observed as atresia-ani and et-recti in calves. It was also found with other congenital defects reported by various authors like anus vaginalis⁴, atresia aniet recti, atersiaani with vaginal-urinary bladder agenesis⁷, atresia ani with scrotal anomaly⁵ and congenital recto-vaginal fistula with atresia ani¹. But, in our study we observed atresia-ani alone. If the rectum ends blindly as a cul- de sac a short distance cranial to the anal membrane, the condition is called rectal atresia⁸.

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