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Surgical Management of Congenital Rectovaginal Fistula and Type III Atresia Ani in an Umbalachery Calf

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Congenital rectovaginal fistula is characterised by the communication between the dorsal wall of the vagina and the ventral portion of the rectum, so that the vulva functions as a common opening to the urogenital and gastrointestinal tracts (Shakoor *et al.,* 2012). Type III Atresia Ani is a congenital anomaly in which imperforate anus combined with the blind rectal pouch which is more than 1 cm away from the anal dimple (Vianna and Tobias, 2005). The present report records a case of congenital rectovaginal fistula and type III Atresia Ani in an Umbalacheri calf and its successful surgical management.

Case History and Observations

A two day old Umbalacheri calf was referred to Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu, Tamil Nadu with a complaint of passing dung through external genitalia since birth and it was treated by a local veterinarian with vain. Clinical examination revealed, passage of dung through vulva and a wound in the anal region inflicted by the local veterinarian. Per vaginal examination revealed 1.5 inches long fistula at the dorsal aspect of vagina at about 1.5 inches cranial to the vulva. There was no bulging of perineal region on pressing the abdomen indicating type III Atresia Ani. All the physiological and biochemical values were within the normal limits. Based on the history, clinical signs and physical examination, the case was diagnosed as rectovaginal fistula with Type III Atresia Ani and reconstructive surgery was opted to correct the condition.

Treatment and Discussion

Under epidural anaesthesia with 2% Lignocaine HCl, the animal was restrained in right lateral recumbency. A small circular incision was made on skin at site where actual anus should be present. Rectal cul-de-sac could not be located below the incised skin confirming it to be type III Atresia Ani. On giving deep incision and removing fascia at site, rectum was visible. Blind end of rectum was freed and taken out and incision was made for dung passage. The edges of the rectal mucosa were sutured with skin by simple interrupted sutures with silk No. 1-0. As

the fistulous orifice was unable to be sutured through vagina or rectum, Fossel's operation was performed to correct rectovaginal fistula by applying a cutaneous transverse incision between the anus and vulva. The incision was further extended cranially and the adhesions around the fistula were dissected free. The rectal defect was closed transversely while the vaginal defect was closed longitudinally using simple continuous suture pattern with PGA 2-0 suture. A sterile 20 ml syringe barrel was cut at non winged end and was inserted into rectum to maintain patency. The winged end was secured to the perineal skin using simple interrupted suture. Post operatively Inj. Ceftriaxone @ 10 mg/kg b.wt. i/v for 5 days and Inj. Meloxicam @ 0.2 mg/kg b.wt. i/m for 3 days were administered. The wound was dressed daily with povidone iodine – metrogyl ointment. The sutures were removed on 15th post operative day and the animal recovered uneventfully.

Atresia Ani is a developmental anomaly, develops when the dorsal part of the cloacal plate fails to form due to autosomal recessive gene, characterized by absence of anus and occasionally accompanied by a rectovaginal fistula in females (Bademkiran *et al.,* 2009). Congenital rectovaginal fistula is considered an embryologic failure of the urorectal septum to separate the cloaca into urethrovesical and rectal segments. Four types of Atresia Ani have been reported namely congenital anal stenosis (Type I); imperforate anus alone (Type II) ,combined with more cranial termination of the rectum as a blind pouch (Type III); and discontinuity of the proximal rectum with normal anal and terminal rectal development (Type IV) (Vianna and Tobias, 2005).

Fig 1: A female Umbalachery calf with congenital rectovaginal fistula and type III atresia ani

Fig 2: Calf after reconstructive surgery and placement of cut barrel of syringe in rectum

Surgical intervention was the only possible solution to cope with congenital anomalies in animals to satisfy the sentiments of owners and to make them economically profitable for the keepers (Shakoor *et al., 2012*). Type III Atretic Ani was successfully corrected by caudal mobilization of rectum in the present case. Martens *et al*. (1995) also suggested that caudal mobilization of atretic rectum is restricted to 5 cm defect. For correction of recto – vaginal fistula, Fossel's operation was followed in the present case as the fistulous orifice was unable to be sutured through vagina or rectum. In the present case the animal recovered without any complications as the postoperative survival rate of animal with Atresia Ani and rectovaginal fistula was found to be related to early recognition,extent of rectal development and successful establishment of a patent intestinal tract.

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