SURGICAL CORRECTION OF ATRESIA ANI ASSOCIATED WITH RECTO-VAGINAL FISTULA IN A MONTH OLD MONGREL PUPPY

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A month old mongrel puppy presented with Atresia Ani in conjunction with rectovaginal fistula and associated clinical signs was subjected to reconstruction surgery. Meticulous obligation to post-operative care resulted in uneventful recovery of the animal.

Keywords: Mongrel dog, Atresia ani, Rectovaginal fistula, Reconstruction surgery.

Congenital abnormalities of the anus and/or rectum with associated urogenital malformations originate from abnormal embryonic development within the cloacal region. The cloaca is a common opening for the gastrointestinal, urinary, and reproductive tracts (Suess et al., 1982). Congenital rectovaginal fistula is characterized 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 (Aronson, 2003). In the present case, congenital atresia ani associated with recto–vaginal fistula and its successful surgical management is reported in a mongrel puppy.

Case history and clinical examination

A one month old Mongrel puppy was presented to the Department of Veterinary Surgery and Radiology, Veterinary College, KVAFSU, Bangalore with a history of absence of anal opening and abnormal defecation through vagina (Fig 1) since birth. As the condition progressed, the dog was showing the symptoms of colic, tenesmus and turbidity in urine. During the clinical examination, atresia ani, presence of feces in the vaginal canal, abdominal distention, and discomfort on abdominal palpation were observed. Exploration through vagina revealed presence of abnormal opening at roof of the vaginal cavity and through that opening faecal material coming out. On applying pressure on abdomen bulging was noticed at the anal region. Based on these observations the condition was diagnosed as congenital atresia ani associated with recto–vaginal fistula and reconstructive surgery was opted to correct the condition.

Surgical procedure

The dog was sedated with diazepam at a dose rate of 0.5mg/kg body weight (I/V). Butorphanol was given at the dose rate of 0.1mg/kg body weight (I/V) as pre emptive analgesia. General anesthesia was induced and maintained with 1% Isoflurane. Dog was placed in sternal recumbency with the tail, held out of the way. The perineal area was prepared for aseptic surgery by scrubbing with povidone iodine. A cruciate incision was made at the site corresponding to the anal orifice. Careful blunt dissection in a forward direction was made to identify the rectal cul-de-sac. After identification, the rectal sac was grasped caudally with a pair of allis tissue forceps and was incised for complete evacuation of rectal passage. The rectal mucosa was sutured by using polypropylene No.0 with the skin using simple interrupted suture pattern covering the whole circumference (Fig. 2). Similarly the communicating fistula (Fistula ring/ edge freshened before closure) between rectum and vagina was also closed with Polydioxanone No.3-0 by using simple interrupted suture pattern. Post operatively, cefazolin was administered at 20 mg/kg BW, I/V, for 7 days and cisaipride @ 0.1 mg/kg BW, PO, for 15 days. The owner was advised to feed the puppy with laxative diet for one week. Isotonic saline solution was used to clean the wound, and skin sutures were removed on 10th post operative day.
Defecation through the anus was reestablished without any postoperative complications.

Figure 1. showing Mongrel puppy with rectovaginal fistula and atresia ani. Fecal material at vagina (blue arrow) and atresia ani (orange arrow)

Figure 2. showing rectified rectovaginal fistula and atresia ani after reconstructive surgery

Discussion
Rectovaginal fistula is considered to be an embryonic failure of the urorectal septum to separate the cloaca into the urethrovesical and rectal segments. In a retrospective study of dogs with atresia ani, an increased prevalence in several breeds, including Poodles and Boston terriers was observed as also reported by Vianna and Tobias (2005); Rahal et al. (2007)). Clinical signs include passage of feces through the vulva, vulvar irritation, tenesmus and megacolon. The clinical signs are often noticed at weaning (between four and six weeks) or even earlier in puppies that are affected. Before weaning, it may be difficult to detect the presence of feces passing through the vulva, because the dam frequently cleans the puppies. In addition, the clinical signs tend to intensify after changing from maternal feeding to a solid diet, because the liquid diet permits the passage of liquid feces and the solid diet induces obstipation and tenesmus as also mentioned by Rahal et al. (2007). Diagnosis is based on history, clinical signs, and physical examination. Radiographic examination with contrast medium infused through the vagina or fistula may be useful for determining the position of the fistula and terminal rectum. Since the clinical signs and physical examination findings were sufficient to establish the diagnosis, radiographic studies were not necessary to confirm the disease. However, radiographs are considered important to determine the position of the fistula and to differentiate the 4 types of congenital atresia ani. Since the clinical signs and physical examination findings were sufficient to establish the diagnosis, radiographic studies were not necessary to confirm the disease. However, radiographs are considered important to determine the position of the fistula and to differentiate the 4 types of congenital atresia ani. Surgery should be performed as soon as possible to avoid deterioration of the physical condition, irreversible megacolon, and possible ascending urinary tract infection as also narrated by Prassinos et al. (2003); Ettinger and Feldman (2005). In the present case none of such complications were encountered in post operative period. Continuation of laxatives post operatively for one week aided for free defecation that avoided pressure on sutures of fistula.
It could be concluded that reconstructive surgery is the only treatment for correcting atresia ani and rectovaginal fistula and the surgical treatment has to be performed as early as possible.

References
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