Surgical Repair of Atresia Ani with Congenital Recto-Vaginal Fistula in Female Calf: Case Report

Ashur K.H¹, Majid A. Alkhilani² and Ali. A. Ajeel³*

¹College of Veterinary Medicine, Wasit University, Iraq, E-mail:alsurgeon.vet@gmail.com
² College of Veterinary Medicine, Al-fallujah University, Iraq, E-mail:majidalkhilani@gmail.com
³ College of Veterinary Medicine, Al-Muthanna University, Iraq, Email:draliabbas1972@yahoo.com

* Correspondence author: Ali. A. Ajeel., College of Veterinary Medicine, Al-Muthanna University, Iraq. E-mail: draliabbas1972@yahoo.com

Abstract

A five female calves about (2-5) months old were presented with congenital atresia ani and recto vaginal fistula; these were clinically examined and recognized as a congenital anomalies. Treatment was effective. Under caudal epidural anesthesia was given with 2% Lidocaine HCL, the anal orifice was reconstructed and the fistulous tract was closed successfully. The rectovaginal fistula was repaired by placing continuous sutures in roof of vagina. Penicillin Streptomycin was injected postoperatively at a dose 10000 IU and 10mg/kg B.W intramuscularly respectively, and the anal stitches were removed after 14 days.

Key words: calf, atresia ani, recto-vaginal fistula and congenital absence


Introduction

Congenital anomalies of body structures present at birth, may be caused by genetic or environmental factors, or a combination of both; in many cases, the causes are unknown, sometime toxic plants consumed by the dam and maternal-fetal viral infections during gestation. Atresia of intestine has been reported as a common congenital defect in domestic mammals (Bademkiran et al., 2006 and Vander and Tibboel, 1980). Congenital abnormalities of gastrointestinal tract in animals are not uncommon, atresia ani refers to congenital absence or closure of normal body opening or tubular structure (Leipold et al., 1972). There is an abnormal passage between rectum and vagina, and feces are voided through the latter due to imperforate anus (Oehme and Prier, 1974). Atresia ani associated with recto-vaginal fistula was reported in calves (Shakoor et al., 2012, Mahesh et al., 2014). This condition needs early correction to avoid infections of urogenital system like pneumovagina, cystitis, vaginitis, cervicitis, endometritis, etc. (Farhoodi et al., 1987). In the present case, congenital atresia ani associated with recto–vaginal fistula in an female calf and its successful surgical management.

Case history and clinical examination

Five cases About (2-5) months old female calves were admitted to the Wasit Veterinary Hospital with history of anal opening absence and feces passing through vulva(Fig 1&2). As the condition progressed, the calf showed symptoms of colic, tenesmus and turbidity in urine. On clinical examination, the calf appeared dull, with arched back showing symptoms of oliguria and dysuria. Exploration through vagina revealed presence of abnormal opening between rectum and vagina by
passing feces through vulva, 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.

**Treatment**

The rectum and vagina were evacuated and area was prepared aseptically. The surgery was carried out under caudal epidural block using 2% lidocaine hydrochloride and the animals were control in lateral recumbency. Cruciate incisions were made on the skin at the palpated area at the subischial region and the rectal swelling was identified by exploration (Fig 3). The rectum was fixed with skin by simple interrupted stitches using silk No.1. The fistulous passage become possess two orifice between the anus and vagina (Fig 4), then make refreshment at the edge of fistulous orifice, washing the area by normal saline and was closed by simple continuous pattern with polyglycolic acid suture No.1 (Fig 5). The postoperatively, the new opening of anus was lubricated with liquid paraffin into rectum twice a day to maintain patency. Penicillin Streptomycin was injected at a dose 10000 IU and 10mg/kg B.W intramuscularly respectively for up to 3 days. The owner was advised to continue laxatives for one week. The sutures of anus were removed on fourteenth day postoperative.
Discussion
Atresia ani is one of such congenital and hereditary anomaly at embryonic period resultant of autosomal recessive gene. Though other reasons like environmental teratogens, plant toxins (Bademkiran et al., 2009) and viral infections (Loynachan et al., 2006). Cattle embryos are more susceptible for chromosomal aberrations between 14 – 42 gestation days leading to mutations (Bademkiran et al., 2009). The increased fecal pressure causes an abnormal opening between rectal wall and vagina in females forming recto-vaginal fistula and thus permitting defecation via vulva. Recto-vaginal defects may introduce fecal material urine and air into the vagina leading to vaginitis, cervicitis, endometritis, failure of conception and repeat breeding. Complications of this defect lead to
economic losses, especially in heifers. (Patil et al., 2011). Surgical intervention is the only possible solution to cope with congenital anomalies in animals (Shakoor et al., 2012). In the case presented, surgical intervention gave successful results. Atresia ani is frequently associated with recto-vaginal fistula between dorsal wall of vagina and ventral wall of terminal rectum. The cystitic signs might be attributed to the ascending infection from the faeces in vagina (Kilic and Sarierler, 2004). Passing of dung through unnatural route was not apparently causing much discomfort to the animal as was reported by (Purohit et al., 2006) which may be due to larger fistulous orifice which could accommodate 3 fingers against size of one finger as reported by (Ali and Youssef 2007). Epidural anaesthesia could achieve sufficient desensitization to complete surgery as followed by (Badawy 2011). However, reports indicated local infiltration of lignocaine (Suthar et al., 2010). For correction of recto–vaginal fistula, Fossel’s operation was also indicated (Venugopalan, 2009) which was not followed here because the fistulous orifice was in reach. Surgical correction was in a manner similar to that of (Shakoor et al., 2012). Fistulous opening was closed in simple interrupted pattern with chromic catgut, but (Rahal et al., 2007) reported use of plastic adhesives. Closure of this orifice required including much of wall of rectum and vagina that led to mild stenosis of both lumens, which may not pose serious implication as the calf grows older. Continuation of laxatives postoperatively 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. Moreover breeding of such surgically treated animals should be discouraged.

References


