



CASE REPORT

Surgical Rectification of Congenital Type II *Atresia ani* Leading to Recto-Vaginal Fistula in Cattle Calves

Sayyed Aun Muhammad^{1,*}, Abdul Shakoor¹, Muhammad Younus¹, Mian Muhammad Awais², Muhammad Kashif¹, M. Kashif Maan³ Muhammad Raza Hameed² and M. Saleem Akhtar²

¹College of Veterinary and Animal Sciences, Sub campus Jhang, University of Veterinary and Animal Sciences, Lahore, Pakistan

²Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan

³Department of Clinical Medicine and Surgery, University of Veterinary and Animal Sciences, Lahore, Pakistan

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*Corresponding Author:

aunmuhammad@uvas.edu.pk

ABSTRACT

Two female calves were presented to Veterinary Teaching Hospital, Department of Clinical Sciences, College of Veterinary and Animal Sciences, Jhang, Pakistan with the complaint of retarded growth and absence of anal opening. In both cases, feces had been passing out through external genitalia. After clinical examination both the cases were diagnosed as the case of *Atresia ani* leading to rectovaginal fistula and subjected to surgical interventions. After preoperative preparation, a circular skin incision was made at the bulge of site to explore the blind loop of rectum. The rectal pouch was grabbed and opened. The edges of rectal mucosa were sutured with skin to maintain the patency of opening. Similarly, the edges of fistula within the vagina were also refreshed and sutured by using simple interrupted suture pattern. After 10 days of post-operative care both the calves got recovered successfully.

INTRODUCTION

Atresia ani is a congenital defect characterized by the absence of anal opening in calves. Sometimes, rectum becomes ruptured due to abdominal straining of animal forming a rectovaginal fistula that allows the excreta to pass out through vulvular opening. Surgical correction is carried out in *atresia ani* to save the life of the animal. Congenital defects or abnormalities of structure are present at birth which may be caused by genetic or environmental factors and/or sometimes the causes are unknown (Smolec et al., 2010). Different types of surgical techniques have been used to correct the *atresia ani* with variable prognosis rate (Singh, 1989; Jubb et al., 1993). This report represents a modified surgical intervention to treat two different cases of *atresia ani* leading to rectovaginal fistula in female calves.

History and clinical signs

Two female calves (one 49 days old calf of non-descript breed and a 70 days old cross bred calf) were presented to Veterinary Teaching Hospital, Department of Clinical Sciences, College of Veterinary and Animal Sciences, Jhang, Pakistan with the complaint of

retarded growth and absence of anal opening. In both the cases, feces had been passing out through external genitalia 3 to 5 days postnatally.

On clinical examination, both the calves had approximately 1-2 cm wide fistula present 4-5 cm at cranial and right dorso lateral aspect of vulva. Feces were coming out from the fistula through vaginal opening. In both cases, both vagina and vulva were normal. Soft sub-cutaneous swelling was also observed at a point of blind anus when animal tried to pass the feces out. After clinical examination both the cases were diagnosed for *Atresia ani* with rectovaginal fistula treated surgically.

Surgical treatment

After preoperative preparation, both the calves were restrained in right lateral recumbency on surgical table. Incision site was desensitized after infiltrating the lignocaine HCl (Dosacaine 2%, Dosaco Lab. Lahore-Pakistan). Following the procedure of Frank (1964), a circular skin incision was made at the bulge of site to explore the blind loop of rectum. The rectal pouch was grabbed and opened. The edges of rectal mucosa were sutured with skin to maintain the patency of opening. Similarly, the edges of fistula within the vagina were



a. Calf 1



b. Calf 2

Fig. 1a-b: Circular skin incision to reconstruct the anal opening

also refreshed and sutured by using simple interrupted suture pattern. After 10 days of post-operative care by using antiseptic dressing with Burnal cream (Abbot Lab. Pakistan) twice a day and broad-spectrum antibiotics (Inj. Penbionic, Nowan Lab., Pakistan). Stiches were removed and both the calves recovered successfully and were completely cured till the filing of this report.

DISCUSSION

Atresia ani is a life threatening condition in male calves; surgical intervention is made to provide new anal passage. In some female calves, due to fecal

pressure rectum breaks through vagina resulting into a rectovaginal fistula that allows the passing of feces via vulva. Such affected female calves do not require an emergency surgical correction (Norrish and Rennie, 1968). In present study, both female calves developed rectovaginal fistula in response to fecal pressure, therefore due to an alternative passage for faeces evacuation these were not presented in emergency by owners to get them treated surgically.

Both the calves got marked improvement in defecation even after 2nd day of surgery and completely recovered within 7 days post surgical treatment. The present cases of *atresia ani* leading to recto-vaginal fistula with uneventful recovery after surgical intervention have similar findings as reported by Steenhaunt et al. (1976) and Nagaraja (2001).

Anal reconstruction can be made painless using sedation and local anesthesia unlike major invasive surgery (Maria and Karen, 2005). In the present study, incisional site was made desensitized after infiltrating the lignocaine HCl and whole surgical procedure was completed without any sign of discomfort.

Conclusion

It could be concluded that like many other congenital abnormalities in calves, *atresia ani* with rectovaginal fistula can be treated by anal reconstructive surgery to save the life of animal.

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