



CASE STUDY

Surgical Management of Atresia Ani in Large White Yorkshire Piglet

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ABSTRACT

A 22 days old piglet was presented at IVRI referral veterinary polyclinic with atresia ani. Atresia ani is a congenital defect described as absence of a normal anal opening. Clinical examination confirmed atresia ani. Affected animal was subjected to surgical anal reconstruction following casting, site preparation and anesthesia. A superficial, point skin incision was given to expose the blind cul-de-sac of the rectum. Full thickness rectum and corresponding skin was secured using simple interrupted stitches. It was opened and meconium was evacuated. The new stoma provides an orifice for normal passage of feces.

Keywords – Atresia ani, Anal reconstruction, Piglet

Received 21.12.2017

Revised 02.01.2018

Accepted 19.01.2018

CITATION OF ARTICLE

Deepesh Gautam, P.D.S Raghuvanshi, Divya Mohan. Surgical Management of Atresia Ani in Large White Yorkshire Piglet. **Adv. Res. Agri. Vet Sci.**, Volume 5 [1] January 2018: 21-22

INTRODUCTION

The failure of anal membrane to break down during the development gives rise to the condition termed imperforated anus and sometimes termed as atresia ani (McGeady *et al.*, 2006). Anal atresia, a naturally occurring nonsyndromal disorder in pigs (Norrish and Rennie, 1968). The prevalence of the disorder varies between 0.1 and 1.0% in different breeds (Hori *et al.* 2001). The short anal canal is the terminal part of the alimentary tract, which opens to the outside via anus. The external and internal anal sphincters control the anus. External sphincter is striated muscle arising from the caudal vertebrae while the internal sphincter consists of smooth muscle. 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. Atresia ani is a fatal affection to the male unless surgical correction is carried out to provide anal opening, in female, rectum frequently break through to vagina forming a rectovaginal fistula and thus permit defecation via the vulva (Norrish and Rennie, *loc cit*). Affected animals may survive up to 10 days and can be identified by their depression, anorexia, colic, marked gradual abdominal distension and lack of feces (Radostits *et al.*, 2007).

CASE HISTORY AND OBSERVATION

A 22 days old piglet suffering from atresia ani was presented at IVRI referral veterinary polyclinic. Physiological parameters were within the normal range. Clinical examination confirmed atresia ani (Fig. 1). The condition was diagnosed by the characteristic clinical signs like absence of anal opening, distended abdomen and straining with appearance of a fluctuating swelling at anal region (Tyagi and Singh, 2013).



Fig 1. Absence of anal opening Fig 2. Evacuation of meconium

TREATMENT AND DISCUSSION

Surgical anal reconstruction was decided to perform to relieve discomfort and save life of piglet. Piglet was sedated with xylazine @ 0.1 mg/kg. Animal was casted in sternal recumbency and both hind limbs were secured. Perineal area was shaved, scrubbed and prepared for aseptic surgery. The ring block was performed with 2% solution of lignocaine hydrochloride around the proposed site. Superficial point incision was made by BP blade No. 12, incision was enlarged and explored. Then, the blind end of the rectum was retracted caudally, and fixed to the perineal skin. Numerous sutures were placed all around the rectum using silk size "1" in simple interrupted pattern holding full thickness of rectum with perineal skin. Then, the blind end of the rectum was incised to evacuate the meconium from the lumen (Fig. 2). Postoperatively, syrup Amoxycillin was given orally for 7 days. Antiseptic dressing of wound was done with povidone iodine solution for 7 days. Piglet made uneventful recovery on 10th post operative day.

SUMMARY

Atresia ani is one of the commonly observed congenital anomaly in calves, lambs and rarely in swine. A successful surgical anal reconstruction was performed in the present case. Radostits *et al.* (*loc cit*) reported that the condition of Atresia ani is inherited in pigs and calves and hence such animals should not be used for breeding purpose.

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