

RECTO-VESICULAR FISTULA WITH ATRESIA ANUS AND RECTUM IN AN AYRSHIRE BULL CALF

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Atresia of anus and rectum is a congenital and hereditary condition which occurs in most domestic animals including piglets, calves, puppies, lambs, kids and foals. (Oehme and Prier, 1974; Hungerford, 1975; Steenhaut *et al.*, 1976; Blood *et al.*, 1979; Johnson *et al.*, 1980; Jennings, 1984; Jubb *et al.*, 1993; Slatter, 1985; West, 1985; Roberts 1986).

The defect could be only a failure to perforate the membrane separating the endoderm of the rectum and the ectoderm of the anus (Jubb *et al.*, 1993). The involvement of the rectum varies such that the rectum may be located some distance from the anus as a blind sac (Oehme and Prier, 1974; Steenhaut *et al.*, 1976; Slatter, 1985). In this condition the accessory structures at the anus are developed and there is usually a dimple at the site of closed anus (Slatter, 1985).

Presence of a fistula between the terminal rectum and urogenital tract may occur in females and there is usually a connection between the rectum and dorsal vaginal wall (Hungerford, 1975, Johnson *et al.*, 1980 ; Steenhaut *et al.*, 1976, Jubb *et al.*, 1993, Slatter, 1985).

Occurrence of a fistula between rectum and urinary bladder has been mentioned (Steenhaut *et al.*, 1976; Jubb *et al.*, 1993) but the species and sex of the animal involved has not been mentioned.

This short communication reports a case of recto-vesicular fistula with atresia of anus and rectum in a bull ayrshire calf.

A four day old male ayrshire calf was presented to the Sokoine University of Agriculture's Veterinary Clinic with a history of lack of anal opening and straining. Urine which was continuously dripping from the prepuce was mixed with fecal material.

On examination the calf was found to be dull and strained occasionally. Urine which dripped from the prepuce was yellowish in colour and contained fecal material. Temperature taken from the mouth was 38.2°C. The umbilical cord was closing normally at the skin level but there was a hernia of about 4 cm in diameter at the linea alba. The calf was feed one litre of cow milk and left overnight for further examination to determine prognosis and treatment.

In the following morning the calf was found dead. There was evisceration and loops of small intestines were hanging at the umbilicus. The loops which were dark red in colour were distended with fluids and gases. There was a 2 cm opening of the umbilical skin which formed a ring around the intestinal mass. The calf was considered to have died of strangulation of the small intestines by a hernial ring.

A postmortem was carried out to determine the original problem of the calf. After opening the abdominal cavity, the abdominal organs were of normal colour, size and consistency except the intestines. The small intestines proximal and distal to the strangulated mass were collapsed and lacked content. The strangulated mass was part of the jejunum. The caecum and proximal colon were distended with gas. The distal colon and rectum were distended with doughy fecal material and were about 4-5 cm in diameter. The rectum ended about 5 cm from the anus.

The urinary bladder, pelvic part of penis, rectum and the perineal tissue including the anal skin were dissected out for further examination. When the urinary bladder was squeezed there was urine and yellowish fecal material coming out of the urethral stump. After the rectum was opened, there was normal faeces. The mucosa and wall of the rectum were normal in colour and consistency.

There was a fistula connecting the rectum and urinary bladder. When a probe was introduced into the fistula was found to be patent and opened at the terminal portion of the rectum. On incising the urinary bladder it was found to be filled with yellow fluidy faeces. The fistula was adjacent to the urethral opening and it had a mucosa lining similar to that of the rectum.

The case was diagnosed as a congenital recto-vesicular fistula with atresia anus and rectum complicated by an umbilical hernia.

Clinically a final diagnosis would not have been possible without use of contrast radiography or an exploratory laparotomy (Steenhaut *et al.*, 1976; Johnson *et al.*, 1980; Jennings, 1984).

In considering treatment of atresia of anus and rectum, it is necessary that all factors are evaluated. In this case the patient was a bull calf and dairy bull calves are usually disposed off at an early age. Treatment of atresia of anus and rectum in calves has been reported (Steenhaut *et al.*, 1976) but none of the cases had a rectovesicular fistula.

Atresia of anus and rectum is considered hereditary (Oehme and Prier, 1974; Steenhaut *et al.*, 1976; Hungerford 1979; Jubb *et al.* 1985; Roberts, 1986). This minimizes the need for surgery of the condition in dairy bull calves.

It is not economical to treat atresia of anus and rectum in bull calves because they can only be fattened for meat. The cost of the operation is usually much more than the value of the calf, because the operation may involve a laparotomy to perform a colostomy through the flank (Oehme and Prier, 1974; Jennings, 1984) or exteriorization of the rectum through the anus and suturing (Steenhaut *et al.*, 1976). The fistula has also to be closed in the second method.

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