
CONGENITAL EVENTRATION WITH EPITHELIOGENESIS IMPERFECTA IN A DAY-OLD KID (*Capra hircus*) AND ITS SURGICAL MANAGEMENT

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ABSTRACT

Successful surgical management of congenital epitheliogenesis imperfecta and eventration of abdominal contents through an incomplete ventral abdominal wall in a day-old kid was reported.

Keywords: Congenital, Eventration, Epitheliogenesis imperfecta

INTRODUCTION

Congenital abnormalities are defined as the structural and functional deformities present at the time of birth. According to Shukla *et al.* (2007) congenital malformations can occur due to either environmental factors or defective genetics or both of them in combination. Abnormal development of the foetus occurs when the genetic and environmental insults reach over the foetal threshold compensatory mechanisms (Fraser, 1976). Epitheliogenesis imperfecta is defined as a condition where some areas of the body are devoid of skin at the time of birth (Benoit-

Biancamano *et al.*, 2006). This condition is also known as aplasia cutis (Leipold *et al.*, 1973). Goat, being a member of subfamily *Caprinae*, shares some generally seen congenital abnormalities with the other domesticated species members of same subfamily (Basrur, 1993). A kid presented to Teaching Veterinary Clinical Complex of Kerala Veterinary and Animal Sciences University, Mannuthy, Kerala with improper development of ventral skin and abdominal wall with eventration of abdominal viscera and its successful surgical management is kept on record.

CASE HISTORY AND OBSERVATIONS

A one-day old male crossbred kid was presented with evisceration of abdominal contents through an incomplete ventral abdominal wall. There was no proper skin development. The animal was weak and the eventrated contents included the whole intestine and liver. The contents were covered by a thick and vascularized peritoneal sac. The animal showed normal

suckling reflex and urination. After stabilizing the animal with fluids, it was decided to correct the condition surgically.

TREATMENT AND DISCUSSION

The area around the eventrated mass was cleaned and prepared aseptically for surgery. The eventration was thoroughly cleaned with normal saline and the animal was positioned in dorsal recumbency. The surgical site was infiltrated with 2 per cent lignocaine hydrochloride at the rate of 2mg/kg body weight. The abdominal defect was extended cranially and caudally. The thickened peritoneal covering of the contents was opened and partially resected. The contents were gently repositioned back into the abdominal cavity. Ventral abdominal defect was closed in routine manner. Skin was apposed using monofilament nylon in horizontal mattress suture pattern.

Post-operatively, the kid was administered with ceftriaxone at the rate of 15 mg/kg body weight intramuscularly for seven days, meloxicam at the rate of 0.2 mg/kg body weight intramuscularly for three days and with vitamin drops orally. The sutures were normal on 10th post-operative day and the animal had an uneventful recovery.

Congenital anomalies are conditions that exist at the time of birth and are due to developmental defects. They can be lethal, semilethal, compatible with life

but with some aesthetic issues or they may not be causing effects at all (Badawy, 2011). Malformation is often considered as a one gene expression and regardless of the mechanism of disruption, it is due to the interference of a vital process in embryogenesis (Basrur, 1993). Congenital eventration is a ventral abdominal defect. It is the protrusion of visceral organs with its serous sac, through a faulty closure of the abdominal wall (Veena *et al.*, 2011). It mostly occurs through umbilicus, and Gahlod *et al.* (2008) reported that ventral umbilical defects are common in kids. Epitheliogenesis imperfecta is the improper development of epidermis of the skin and the incidence of this condition is due to simple autosomal recessive gene (Rousseaux, 1994). Senna *et al.* (2003) also reported epitheliogenesis imperfecta with visceral eventration through umbilicus in lamb and kid and its surgical correction. Gangwar *et al.* (2014) reported a similar case in kid in which intestine and spleen were involved. Saradamma *et al.* (2000) reported a case in a kid in which intestine, liver and abomasum were involved and corrected it surgically. Nigam *et al.* (1984) also performed similar method of surgical management in calves and reported that most of the congenital defects which needed surgical interventions used to be recognized within 2-3 days after birth in animals. Niwas *et al.* (2020) opined that survival of animals with



Fig. 1. Eventrated intestines and liver with peritoneal covering

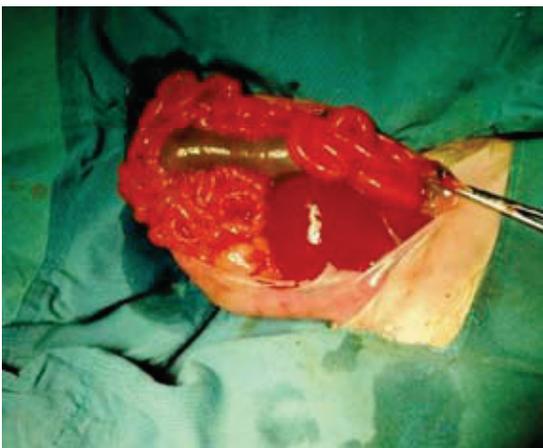


Fig. 2. Eventration after opening of peritoneal covering



Fig. 3. Animal on tenth post-operative day

congenital anomalies could be significantly improved by surgical interventions in

time and most of these conditions needed immediate intervention. Farghali *et al.* (2020) opined that late interventions could lead to complications that may ultimately end up in culling of animal.

CONCLUSION

Epitheliogenesis imperfecta and eventration are congenital anomalies. The conditions are rarely reported in goats. Timely surgical intervention was needed to correct the eventration. In the present case report, both conditions were successfully managed.

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