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Bulldog Calf: A Case Report

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ABSTRACT

A very rare case of bulldog calf in a crossbred Holstein Frisian cow from the rural area of Kashmir valley was reported. This report would help in drawing the attention of animal breeders of Kashmir with respect to collection of sire and dam's pedigree information before breeding of their cattle as the condition is hereditary in nature.

Key words: Foetal monstrosity, bulldog calf, dystocia, cow, Kashmir

INTRODUCTION

Foetal anomalies and monstrosities of various kinds have been recorded in bovines (Marathe *et al.*, 1982; Robetr, 2004; Noakes *et al.*, 2001) and occur sporadically (Arthur *et al.*, 1989). It is one of the main causes of dystocia in animals (Sloss and Dufty, 1980). Occurrence of Chondrodysplasia is a very rare condition (Noakes *et al.*, 2001; Robetr, 2004). Chondrodysplasia is a disturbance of endochondral ossification leading to disordered bone development (Gentele and Testoni, 2006). Although, several types of chondrodysplasia are known, the most common form is the so-called Bulldog calf.

A bulldog calf is a deformed aborted foetus, compressed skull, flat head with a short nose and sloping forehead with short and stumpy limbs, a nose divided by furrows and a shortened upper jaw, giving a bulldog facial appearance (Gentele and Testoni, 2006; Pandey *et al.*, 2010). It is hereditary in many cattle breeds including Dexter, where, characteristic features recorded were abortion, disproportionate dwarfism, a short vertebral column, marked micromelia, a relatively large head with retruded muzzle, cleft palate and protruding tongue and a large abdominal hernia (Harper *et al.*, 1998).

The condition occurs mainly due to autosomal recessive gene (Robetr, 2004). The occurrence of this condition has been reported from abroad in cow (Robetr, 2004; Harper *et al.*, 1998) and in buffaloes (Christopher, 2000). Although, the condition has been reported from some parts of our country (Kumar *et al.*, 2007; Shukla *et al.*, 2007), no report is available from Kashmir valley, a temperate region of India. In overcoming the undesirable effect of any condition in a herd it is mandatory to report and describe the condition in a scientific manner. The reporting and, possibly, the referring of any suspected case to diagnostic centres is therefore, an indispensable step towards improving the possibility of recognition (Gentele and Testoni, 2006). Therefore, it is necessary to develop a programme to identify the carriers of an undesirable pathological character and to increase relative clinical and pathological knowledge so that future cases can be better diagnosed

and possibly prevented. The present communication reports such a rare case of bulldog calf in a crossbred Friesian cow from rural area of Kashmir.

CASE HISTORY, OBSERVATION AND TREATMENT

A pluriparous crossbred Friesian cow, aged 11 years at her full term was presented with the history of straining since 2 days. The cow had 5 normal calvings reported earlier. Valethamate bromide, oxytocin and PGF₂- α had been administered for incomplete cervical dilatation by a local veterinarian with no success. The animal had already developed severe abdominal distention, tympanitis and deep abdominal respiration. It was also dehydrated depressed, hypothermic (98°F) and bradycardiac. Pervaginal examination revealed 3 finger dilated cervix in which one limb of the foetus engaged. Trocarization of rumen was followed by initiation of fluid therapy. The animal could not keep standing and sat down within 15 min of admission. Caesarean was conducted under local infiltration of 2% lignocaine hydrochloride (60 mL) using left ventro-lateral (oblique) approach. On incising peritoneum 6-7 L of sanguinous foul smelling fluid gushed out of the laparotomy incision. Foetus was found in abdominal cavity outside the uterus. The uterus had ruptured completely. Peritoneal cavity was contaminated with meconium leading to diffuse peritonitis. Internal haemorrhage was identified by the presence of clotted blood in the peritoneal cavity. A dead bulldog calf (Fig. 1) was removed from the abdominal cavity. Uterus was douched with 60 mL of 5% levofloxacin. Uterus was sutured with chromic catgut No. 2. Peritoneal cavity was flushed with 0.9% lukewarm sodium chloride solution. Abdominal muscles and skin were sutured routinely. Oxytetracycline and meloxicam were continued for 7 and 3 days, respectively with regular antiseptic dressing.

DISCUSSION

The appearance of foetus was bulldog with overgrown mandible, shortened upper jaw, prolonged lower jaw (prognathism), nose divided by furrows and protruded tongue. Similar types of findings were recorded earlier in cattle (Harper *et al.*, 1998; Kumar *et al.*, 2007) and buffaloes (Christopher, 2000). There was large amount of subcutaneous fat at different sites and foetus weighed 50 kg (Fig. 1). Bulldog may be confused with foetal anasarca in which there is accumulation of fluid in the subcutaneous tissues and body cavities (Arthur *et al.*, 1989; Robetrs, 2004). However, in the present case there was no accumulating subcutaneous fluid; thus



Fig. 1: Bulldog calf with overgrown mandible and protruded tongue

possibility of anasarca was ruled out. The condition is very rare and develops due to autosomal recessive gene (Harper *et al.*, 1998; Robetrs, 2004). However, in the present case pedigree and breeding record of the dam could not be extracted as owner purchased the animal only few months prior to calving from local market.

CONCLUSION

Pedigree record of sire and dam is always necessary and an important aspect of breeding of animals. That will help in minimizing the occurrence of foetal anomalies which arises primarily due to some genetic defect.

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