The Indian Journal of Animal Reproduction; 29(2):209-210; December 2008 **Short Communication**

Congenital Malformations in Bovine

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ABSTRACT

The paper documents congenital malformations in bovine presented during last 15 years. An overall incidence of 0.4% of bovine congenital malformations was recorded. The percentage of malformation was higher in male calves (54.72%) than female calves (44.84%). Highest prevalence of congenital malformations (49.4%) was recorded in cross bred Jersey calves followed by 30.4% and 19.76% in cross bred Holsteins and local non- descript calves, respectively. Congenitally defective calves were born more to primiparous dams (56.24%) than to pleuriparous dams (43.32%). Still born defective calves recorded were 7.6%, where as only 5.3 % cases were born with dystocia. Highest number of congenital defects (31.16%) was related with digestive system with Artesia ani as the single most prevalent deformity (13.68%) among all recorded defects. Only 3.04% udder defects were recorded in Primiparous heifers.

Key words: Artesla ani, Calf, Congenital defects, Dystocia

INTRODUCTION

The present study was aimed to document and analyze the congenital defects recorded among calves for a period of 15 years (1991 to 2006) presented for treatment. The study was conducted in districts of Kashmir valley especially in the areas now falling in recently created districts of Bandiporrah and Ganderbal. During the period a total of 2080 calves were born. Of this only 29 were congenitally defective giving an over all incidence of 0.4%. These findings are in total agreement with those of Leipold and Dennis (1986), who have reported incidence of congenital defects among all calves to range from 0.2 to 3.0%.

An overall study revealed cross bred Jersey calves were most affected (49.4%), followed by cross bred Holsteins (30.4%) and local non descript calves (19.6%). Highest incidence in cross bred calves could be attributed to intensive breeding (Blood *et al*, 1979). The findings are in consonance with those of Charar *et al.* (1986).

Male calves were more affected (54.72%) than female calves (44.84%). The findings do not corroborate with those of Balagopalan *et al.* (1997), but are in total agreement with those of Singh (1989). The causes for this sex difference needs to be elucidated.

Only 7.6% defective stillbirths were recorded. This incidence is far below than 40-50% reported by Leipold and Dennis (1986). Lower percentage of defective stillbirths in the present study could be attributed to the fact that the defects of dead calves born usually go unnoticed.

The defective conditions of dead calves causing dystocia included: fetal ascites (3), Schistosoma reflexus (3), bilateral contracted flexor tendon (1). Other conditions which caused dystocia but the calves were delivered alive included: bilateral contracted tendon- knee joint (2), unilalateral contracted tendon –knee joint (1). Of the three dropsical fetuses, two were found in posterior longitudinal presentation with dorso-pubic position and were delivered by mutation after evacuating their abdominal cavities of all fluid through stab incision. The third dropsical fetus was found in normal presentation and could be delivered only through the laparohysterotomy. All the fetuses were of full gestation, as dropsical fetuses can cause dystocia only if these are of full gestation period (Arthur *et al.*, 1989), otherwise abortions occur (Singh *et al.*, 1996).Schistosoma reflexus monsters caused dystocia in 2 cases due to presentation of wider fetal diameter at pelvic inlet arising out of vertebral transverse presentation and

gross irregular development of fetus including the bending of the vertebral column and ankylosis of limbs. Fetotomy sufficed to relieve the dystocia. However, in one case, Schistosoma reflexus monster was presented posteriorly and had got wedged in the pelvis, thus fetus was delivered through cesarean section. Wani *et al.* (1994) had also resorted to cesarean section for relieving of dystocia in a corriedale ewe due to schistosoma reflexus. The etiology of contracted flexor tendons is obscure, though various factors viz., nutrition, rheumatism, uterine malpositioning (Jhonson, 1973) and genetic factors (Hutt, 1968) have been described. However, in the present study etiology could not be ascertained and dystocia caused was because of defective posture of limbs and fetuses were delivered by manipulation.

Primiparous dams gave birth to more defective calves (54.72%) than pluriparous (44.84%). This finding coincides with those of Leipold and Dennis (1986).

Congenital malformations often involve multiple body systems. During this study digestive system was found most affected (31.16%) followed by ocular system (25.08%), muscular system/abdominal wall (16.72%), musculoskeletal system (11.04%), urinary system (7.4%), nervous system (4.56%), udder defects (3.8%) and skin defects (1%). The findings coincide with those of Balagopalan *et al.* (1997) and Singh (1989).

Multiple defects were found in 16.72%, of which 15.96% had digestive system related multiple defects and only one calf (0.76%) had urinary system and skin defects together. Makkena *et al.* (1997) have also observed multiple defects.

Atresia ani was the most common defect observed (13.68%). Atresia ani was found in association with other defects in 15.2% cases. Atresia ani et rectus follows the Atresia ani in its prevalence (9.12%). Jubb *et al.* (1993) also reported atresia ani as the most common congenital defects of lower gastrointestinal tract. The findings are also in agreement with those of Balagopalan *et al.* (1997) and Singh (1989).

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