Himachal Journal of Agricultural Research 42(2): 195-196 (2016)

Short Note

A rare case of dystocia due to Monocephalus Diprosopus Monster in a cow

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Received: 22 September 2016; Accepted: 22 November 2016

Key words: Monocephalus diprosopus monster, Cow, Congenital anomaly.

A monster is an abnormally formed fetus with congenital anomaly. Fetal monsters are common cause of dystocia in bovines (Shukla *et al.* 2007). The conjoined twin a rare disorder occurring in monozygotic twin pregnancies (Roberts 2004). Duplication and fusion of varying degree is seen in the conjoined monsters twins but anterior duplication is more common in swine and ruminants (Arthur *et al.* 2001). Anterior duplication of head may be either monocephalus or dicephalus. Monocephalus monster are having partial duplication of frontal region, nose and mouth are called diprosopus or double face. Monocephalus Diprosopus monsters have single head with two faces. (Roberts 2004). Such types of monsters most of the time cause dystocia and has to be removed by laparohysterotomy (Sharma *et al.* 2010, Gupta *et al.* 2011).

Five years old crossbred, primiparous cow with the history of gestation of 280 days was brought to the Veterinary Hospital Bijhari, District Hamirpur (H.P). Animal was straining for the last six hours. Even after the expulsion of the first water bag, there was no expulsion of the fetus. Per-vaginal examination revealed the presence of abnormal fetus with two faces joined to each other at around 30^0 angle in anterior longitudinal presentation, dorso-sacral position with both forelimbs in birth canal. As the size of the head was larger and it was not possible to pull the fetus through per-vaginum, so it was decided to remove the fetus through caesarean section.

The cow was pre-medicated with anti shock therapy with Inj. Dexamethasone (Dexona®) 40 mg, i.m. total dose, hemostat (Inj. Revici®) 20 ml, i.m. and local infiltration anesthesia was achieved by using Lignocaine hydrochloride (Xylocaine®). The left lower flank laparohysterotomy (Fig. 2) was performed after restraining the animal in standing position. The uterus was sutured by Cushing suture pattern, peritoneum and first muscle layer was sutured by lock stitch suture pattern, second and third muscle layer was sutured by simple continuous suture pattern and skin was sutured by applying horizontal mattress. The cow was treated with inj. Strepto-Penicillin (Dicrysticin®) 2.5 g bid i.m. inj. Meloxicam (Melonex®) 15 ml i.m. for 5 days. The fluid therapy was done with inj. Ringer's Lactate (4 litres), inj. Normal Saline (2 litres) by i.v. route along with supportive therapy for 5 days. Antiseptic dressing was done on alternate days using Povidone Iodine. The sutures were removed after 10 days of the caesarean section.



Fig.1 Monocephalus Diprosopus fetal head



Fig.2 Lower Flank laparohysterotomy

The fetus had two fused faces on single head and neck. The pinnae of the medial ears were fused at the base (Fig. 1). The neck, thorax, abdomen and limbs were grossly normal. These observations are in consonance with the earlier findings (Fisher *et al.* 1986). Dicephalus monsters have been reported in buffaloes (Srivastava *et al.* 2008, Gupta *et al.* 2011), goats (Pandit *et al.* 1994), and cows (Abrahan *et al.* 2007). The Embryonic duplications are malformation due to abnormal duplication of the germinal area giving rise to fetuses whose body structures are partially duplicated. The embryonic disk starts to differentiate on the 13th day. If the split occurs after day 13, then the twins will share body parts in addition to sharing their chorion and amnion (Finberg 1994). It is presently thought that these factors are responsible for the failure of twins to separate after the 13th day after fertilization (Srivastava *et al.* 2008). The important known causes are prenatal infection with a virus, poisons ingested by mother, vitamin deficiency (A and Folic acid), genetic factors and/or combination of these factors (Jones and Hunt 1983).

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