

BULL DOG CALF MONSTROSITY ASSOCIATED WITH ANASARCA IN MURRAH BUFFALO CALF – A CASE REPORT

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SUMMARY

A Murrah buffalo in her fifth lactation and nine month of pregnancy was brought to Veterinary Clinical Complex which was suffering from dystocia. Per-vaginal examination revealed abnormal fetal head, face and with excessively enlarged shoulder and fetal abdomen. The dystocia was relieved by caesarean section and upon further investigations fetus was confirmed as bull dog calf monster with anasarca.

Key words: Anasarca, Buffalo, Bull dog, Dystocia, Monster, Caesarean section

Congenital malformations (due to genetic causes) represent a hidden danger for animal production, when genetic selection is undertaken for production improvement. These malformations are responsible for economic losses either because they reduce the productivity of the farm, or because of their inherent character. (Albarella *et al.*, 2017). Monstrosities are developmental disturbances causing great distortion of individual and are associated with either infectious disease or congenital defects (Arthur *et al.*, 2001) and may or may not interfere with the parturition process.

Several types of achondrodysplasia are known, the most common form is Bulldog calf (Bhattacharya *et al.*, 2012). A bull dog fetal monster is a deformed foetus, with compressed skull, flat head with sloping or bulged forehead and short nose divided by furrows, shortened upper jaw with short and stumpy limbs (micromelia), giving a bulldog like facial appearance in calf (Gentele and Testoni, 2006). The occurrence of this condition has been reported in cow (Harper *et al.*, 1998; Roberts, 2004; Bhattacharya *et al.*, 2012; Manokaran *et al.*, 2015) and in buffaloes (Christopher, 2000; Prabakaran *et al.*, 2013). Fetal anasarca is a condition characterized by excessive accumulation of fluid in the subcutaneous tissues leading to subcutaneous edema of the foetus. It is mostly seen in cattle but may affect other species such as buffalo and sheep (Sloss and Dufty, 1980). The condition is commonly associated with either infectious diseases or developmental defects of foetus. It is said to be due to autosomal recessive gene (Roberts, 2004) and electrolyte imbalance (Faber and Anderson, 1990). Rarely mild hydrops of the amnion and/or allantois and edema of the placenta may result in fetal anasarca (Arthur *et al.*, 2001).

A Murrah buffalo (E-5-1059 dated 27.05.2018) in fifth lactation suffering from dystocia was brought to Veterinary Clinical Complex, LUVAS, Hisar. The anamnesis revealed 9 months pregnancy and cervico-vaginal discharge for last three days. The local practitioner administered progesterone on first day of treatment but since then the discharge continued and both the water bag

ruptured four hours before reporting to clinics. Subsequent to epidural anaesthesia and lubrication, per-vaginal examination revealed presence of stumpy forelimbs into birth canal and enlarged foetus. The foetus was absolutely oversized and uterus was compacted around the foetus. After thorough physical and per vaginal examination the decision was taken out to relieve the dystocia by caesarean section.

The animal was subjected to caesarean section through ventro-lateral approach and the dead monster fetus alongwith the fetal membranes was delivered. Anteriorly, the foetus was bull dog calf monster whereas posteriorly it was excessively enlarged and multiple skin incisions were given at the time of delivery through caesarean section which confirmed association of anasarca (Fig. 1). Grossly, the foetus had large head, small eyes, short neck with abnormally short limbs (micromelia) and under developed tail. Based on the above characters the foetus was identified as bull dog foetus.

Post-mortem examination of the foetus revealed hypoplastic lungs, normal heart (Fig. 2), spleen, kidneys and intestine and hepatomegaly (Fig. 3). There was complete absence of external (Fig. 4) as well as internal genitalia (Fig. 5). The dam was administered with Inj. Cefaperazone plus sulbactam 4.5gm I/M, Inj. Flunixin meglumine 1000mg I/M, Inj. Chlorpheniramine maleate 227.5 mg I/M, Inj. Calcium boro-gluconate 450 ml slow I/V, inj. Oxytocin 50 I.U. in 1000 ml normal saline solution I/V and inj. Metronidazole 3000 mg I/V. Except Calcium boro-gluconate and Oxytocin, rest of the treatment advised for next seven days. The animal recovered uneventfully without any complication.

The gross examination revealed that the foetus was fully developed with skin all over body. It had bulging forehead with abnormal trunk and abdomen. The forelimbs and hind limbs were stunted. Similar findings were reported by Manokaran *et al.* (2015) in cattle. The head, neck, abdomen and subcutaneous tissue were distended with fluid to defined it as fetal anasarca. Fetal anasarca is a rare condition in which the foetus may be 3 times the normal birth weight with excessive subcutaneous

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Fig. 1: Bull dog calf monster associated with anasarca; **Fig. 2:** Hypoplastic lungs and normal fetal heart; **Fig. 3:** Hepatomegaly of fetal liver; **Fig.4:** Absence of external genitalia; **Fig. 5:** Absence of internal genitalia

fluid accumulation causing dystocia. Noakes *et al.* (2009) stated that fetal anasarca requires multiple incisions to drain liquid as done in the present case. Similar case of dystocia in Murrah buffalo due to fetal anasarca with micromelia was reported by Prasad and Kishore (2015). The calf usually got aborted one or two months prior to term or may be delivered at term with dystocia (Sane *et al.*, 1994). The absence of external and internal genitalia observed in the present case was not reported previously by other workers. Manokaran *et al.* (2013) in ewe through caesarean section and Reddy *et al.* (2017) in doe per-vaginally delivered the bull dog monster associated with fetal anasarca. Similar case bull dog monster with complete anasarca in buffalo was delivered through mutation by Shukla *et al.* (2007). Therefore, the cases of dystocia due to bull dog calf monstrosity associated with anasarca can be delivered wisely by caesarean section.

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