

Case Study

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## Dystocia Due to Hydroallantois and Congenital Foetal Ascites in a Murrah Buffalo - A Case Report

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### ABSTRACT

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#### Article Info

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A seven year old pluriparous buffalo at full term with the history of sudden bilateral enlargement of abdomen since one month having progressive anxiety and respiratory discomfort was presented to Veterinary Clinical Complex. The animal was treated with Cloprostenol, Dexamethasone, Estradiol valerate, Valethamate bromide. The successful delivery of an ascitic fetus in hydroallantoic buffalo is reported here.

### Introduction

Hydroallantois is one of the gestational disorder in which sudden increase in allantoic fluid occurs in allantoic cavity due to foetal membrane pathology leading to bilateral enlargement of abdomen (Roberts, 1971). This is more common in last phase of third trimester in dairy and beef cattle and less so in buffaloes and heifers (Srinivas and Sreenu, 2006). Hydrallantois is usually considered as maternal abnormality, where the rapid and abnormal distension of abdomen occurs (Drivers and Peek, 2008) due to rapid accumulation of watery, amber color fluid inside the allantoic cavity over a period of 5 to 20 days in late gestation and is always giving

suspicion for twin/triplet pregnancy (Morrow, 1986). It accounts for about 80-90 % of uterine hydrops (Sloss and Dufty, 1980; Selvaraju *et al.*, 2012).

This condition invariably results in fetal gestational accident owing to placental dysfunction and fetal kidney failure (Arthur *et al.*, 1989; Jana and Ghosh, 2012). Roberts (1971) stated that this dropsical condition usually affects both fetus and fetal membranes. It is usually seen sporadically in dairy and beef cattle. It is usually associated with a diseased uterus in which most of the caruncles in one horn are not functional and rests of the placentomes are greatly enlarged and possibly diseased (Roberts, 1971).

### **Case history and clinical observations**

A seven year old pregnant Murrah buffalo at full term was presented to Veterinary Clinical Complex with the history of sudden enlargement of abdomen (Fig. 3), respiratory discomfort and progressive anxiety. The buffalo was dull and depressed with sunken eye balls, dry muzzle and severely dehydrated body. Per-rectal examination revealed grossly distended uterus and inability to palpate the fetus. On per vaginal examination, the cervix was found to be closed. Based on history, symptoms and observations, the case was diagnosed as hydroallantois.

### **Treatment and Discussion**

The animal was treated with 2ml Metrum (Cloprostenol; Macwell Pharma) IM, 10 ml Dexona (Dexamethsone; Zydus AHL) IM, 10 ml Epidosin (Valethamate bromide; TTK) IM, 10 ml Avil (Chlorpheniramine maleate; MSD Animal Health) IM, 2ml Pregheat® (Estradiol valerate; Virbac India)IM, 450 ml of Mifex® (Calcium-magnesium-boro-gluconate; Novartis India Limited) IV and 5 litres of Dextrose Normal Saline (Dextrose 5%; Fresenius Kabi) IV.

After 12 hours, per vaginal examination revealed complete dilatation of cervix and presence of water bag in birth canal. So 10 ml Pitocin (Oxytocin; Pfizer) in 1 liter of Dextrose Normal Saline (Dextrose 5%; Fresenius Kabi) IV, 4 litres of Dextrose Normal Saline (Dextrose 5%; Fresenius Kabi) was given subsequently. After 30 minutes of administration of oxytocin, large quantity of watery and amber coloured allantoic fluid oozed out. Assisted delivery yielded ascitic fetus (Fig. 2) followed by expulsion of oedematous placenta having abnormal cotyledons (Fig. 1). Post mortem of dead foetus revealed presence of ascitic fluid in abdominal cavity. The uneventful recovery of

the dam was noticed. Similar recovery has been reported by Bhoi (2010) in a non-descript buffalo.

Dropsical conditions of the concepts appear to be one of the most important factors leading to dystocia (Noakes *et al.*, 2001). Both the amniotic and allantoic sacs can accumulate excessive quantities of fetal fluid, thus referred as Hydramnios or hydrallantois, depending on involvement of sac. Hydrallantois and Hydramnios represent dropsy of fetal sacs. According to Vandeplassche *et al.*, (1965) hydrallantois is most common (88%), hydramnion occurs rarely (5%) and about (7%) cases occur together. Hydroallantois is commonly associated with either infectious diseases or developmental defects of foetus. Fetal dropsical conditions such as ascites have been previously reported in buffalo with hydroallantois (Srinivas and Sreenu, 2006). Accumulation of allantoic fluid is rapid due to placental abnormalities and possible interference with sodium metabolism at cellular level (Jackson, 1980).

Pregnancy in buffaloes affected with hydroallantois was terminated successfully using dexamethasone (Chandolia *et al.*, 1988 and Prabhakar *et al.*, 1991), prostaglandin analogues (Chandolia *et al.*, 1989) and combination of prostaglandin and corticosteroid (Luthra *et al.*, 2001).

Similar to the present case report of hydroallantois was seen mostly during last month of gestation and its treatment always recommends administration of fluid intravenously and termination of pregnancy. If a large volume of allantoic fluid in the uterus is expelled rapidly, circulatory shock may develop. In the present case, the combined therapy of Lutalyse, Dexona, Epidosin and rapid infusion of DNS to avoid hypovolumic shock, helped in recovery of the dam.

**Fig.1** Oedematous placenta with abnormal cotyledons



**Fig.2** Ascitic foetus delivered by traction



**Fig.3** Abdominal distension in affected buffalo



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