

HYDROALLANTOIS IN A BUFFALO: CASE REPORTC. ROHIT KUMAR^{1*}, HIDAYAT A. SHAIKH², AKASH BALATE², VIJAY K. KAKDE² and ANIL V. KANDARPALLE²

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SUMMARY

A non-descript buffalo in second parity suffering from hydroallantois was successfully treated by induction of parturition; allantocentesis and fluid therapy resulting in uneventful recovery.

Key words: Allantocentesis, Buffalo, Hydroallantois, Induction of parturition

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. This is more common during last phase of third trimester in cattle and buffalo (Kumar *et al.*, 2012). If the case is not diagnosed and treated early, in advanced conditions the animal is unable to rise and the prognosis is grave. This condition is seen sporadically in dairy animals and usually affects both foetus and foetal membranes (Napolean *et al.*, 2012). The physiopathology of hydroallantois is related to the reduction of placental vascularization resulting in metabolic changes in the placental tissue and foetal membranes thereby accumulating foetal fluids. Additionally, foetal malformation, foetal hepatic or renal disorders (hydronephrosis) and umbilical cord torsion also cause hydroallantois (Kapadiya *et al.*, 2018). The present report describes a case of hydroallantois and its successful management in an eight month pregnant non-descript buffalo.

A 6-year-old buffalo at 8 months of gestation presented to the Banswada Mobile Veterinary Clinic Kamareddy district, Telangana working under Pashu Aarogya Seva (PAS) project was operated by GVK, Emergency Management and Research Institute under Public private partnership mode. As per history, the buffalo had previous pregnancy as normal. Anamnesis revealed sudden bilateral enlargement of abdomen (Fig.1) in last 8-10 days with progressive anxiety, difficult breathing and inability to sit on its own. Initially the case was treated as a bloat by local veterinarian without success. The general clinical examination revealed, severe dullness, sunken eyes, dry muzzle, anxiety, shallow laboured respiration and congested mucous membranes but with normal body temperature and bilateral heavy distension of abdomen. The pulse rate, respiratory rate and rectal temperature were 98/min, 30/min and 100.2 °F, respectively.

Per-rectal examination revealed extensively distended fluid filled uterus occupying most of the pelvic and abdominal cavities. No foetal part could be palpated per rectally. Vaginal examination revealed closed cervix. Based on history, symptoms and clinical observations, the

case was diagnosed as hydroallantois and it was decided to induce parturition with medical management.

Parturition was induced first by using Inj. Dinoprost tromethamine 25 mg, I/M and Inj. Dexamethasone sodium phosphate 40 mg, I/M. Supportive treatment was also given for prevention of secondary bacterial infection. After 24 hours of induction, animal showed signs of parturition and tenesmus but failed to expel water bag. Then, the buffalo was examined per vaginally and partially dilated cervix and tense water bag was palpated. For removal of allantoic fluid, hand was inserted in vagina and protruded part of allantoic sac was ruptured to drain the fluid from gravid uterus. Simultaneously, the animal was medicated with 5 litres each of 5% dextrose normal saline and normal saline solution intravenously. Initially, 80 litres of fluid was drained out spontaneously and by continuous per vaginal examination remaining allantoic fluid was drained out. About 100 litres of allantoic fluid was drained (Fig. 2) and the sapped allantoic fluid was watery and amber in colour. After complete removal of allantoic fluid, dead foetus was palpable and delivered by traction (Fig.3). The male foetus was fully developed without any physical defect. The placenta was removed manually. Injection of Ceftiofur sodium 1 gm and injection of Dexamethasone 35mg were given intravenously, whereas, injection of Meloxicam 75 mg was administered intramuscularly. Bolus comprising of Furazolidone and Urea was placed in uterus. The same treatment was continued for next 3 days excluding Inj. Dexamethasone. The animal recovered uneventfully.



Fig.1: Animal with bilateral enlargement of abdomen; Fig. 2: Animal showing discharge of allantoic fluid

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Fig. 3: Dead fetus delivered by traction

Hydroallantois is rarely diagnosed gestational disorder and usually affects cows (Rangasamy *et al.*, 2013; and Resum *et al.*, 2016) and buffalo (Kumar *et al.*, 2012). It is seen mostly during 8-9 months of pregnancy of cattle and buffalo (Roberts, 1971). Similarly, in the present case the condition was seen in 8 months of pregnancy. Hydroallantois may occur due to dysfunctional maternal caruncles owing to uterine diseases leading to enlargement and edematous condition of placentomes with consequences of adventitious placenta (Drost, 2007). Such adventitious placentae are even formed owing to congenital lack of maternal caruncles (Roberts, 1971). The treatment protocol of hydroallantois depends on the degree of severity of the condition and prognosis. Excessive fluid accumulation in hydroallantois condition results in abdominal distension and sometimes loss of condition and recumbency with consequences of fatality to dam (Noakes *et al.*, 2009). Further, factors like increased membrane permeability and decreased active transport of sodium across the chorioallantoic membrane, hormonal imbalances and fetal renal disease are also responsible for hydroallantois (Morin *et al.*, 1994). Different treatment protocols like use of PGF_{2a} preparations, Dexamethasone and Estrogen preparations have been followed by veterinarians for the induction of parturition in cattle and buffaloes (Sharp *et al.*, 1978; Kumar *et al.*, 2012). Generally, supportive fluid therapy is recommended with slow and continuous removal of the excessive allantoic fluid to avoid

hypovolemic shock due to sudden expulsion of allantoic fluid during pregnancy termination which was also followed in the present case. Outcome of the case indicated that early diagnosis followed by strategic medication with fluid therapy is very important for survival of the dam.

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