Case Study

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

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A B S T R A C T

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 dropscial 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; Zy dus 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.

Dropical 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 hydallantois, depending on involvement of sac. Hydallantois and Hydramnios represent dropsy of fetal sacs. According to Vandeplasche et al., (1965) hydallantois is most common (88%), hydramnion occurs rarely (5%) and about (7%) cases occur together. Hydallantois 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.
References

Arthur, G.H., Noakes, D.E. and Pearson, H. (1989). Veterinary Reproduction and Obstetrics, ELBS, 118-120.

Bhoi, D.B. (2010). International Symposium on “Biotechnologies for optimization of reproductive efficiency of dam and companion animals to improve global food security and human health” and XXVI Annual Convention of ISSAR, Nov. 10-12, held at G.B.P.U.A & T. Pantnagar. p 156 (abstract).

Chandolia, R.K., Khar, S.K. Chander, S. and Verma, S.K. (1988). Induction of parturition with dexamethasone in buffalo with hydroallantois. *Indian Vet. J.* 65: 156-158.

Chandolia, R.K., Verma, S.K., Chander, S., Singh, N. and Chandana, I.S. (1989). Response of two buffaloes with hydroamnios and hydroallantois to treatment with dinoprost - a case report. *Indian Vet. J.* 66: 861-864.

Drivers TJ, Peek S. (2008). Rebhun’s diseases of dairy cattle. 2nd edn. Saunders Elsevier, St. Louis, Missouri. Pp. 395.

Jackson, P.G.G. (1995). Handbook of
Veterinary Obstetrics, 2nd edn. W.B. Saunders Company Philadelphia, USA. Pp. 123-127.

Jana, B and Ghosh, M. (2012). Indian Journal of Field Veterinarians. 7(4): 51-52.

Luthra, R.A., Khar, S.K. and Nanda, T. (2001). Therapeutic management of hydroallantois in buffaloes. Intas Polivet. 2: 24-26.

Misri, J. and Singh, N. (2001). Hydrallantois in a goat. Indian Vet. J. 78(3): 255-256.

Morrow AD. (1986). Current Therapy in Theriogenology. WB Saunders Company, Philadelphia, USA. 207-208.

Noakes, D.E., Parkinson, T.J. and England, G.C.W. (2009). Veterinary Reproduction and Obstetrics, 9th Edn. Saunders Elsevier. p 141.

Noakes, D.E., Parkinson, D.J. and England, G.C.W. (2001). Anomalies of development of the conceptus - Teratology In Noakes, D.E., (8th edn.) Arthurs Veterinary Reproduction and Obstetrics, Saunders Harcourt, India, 119-120.

Prabhakar, S., Dhaliwal, G.S. and Sharma. R.D. (1991). Effect of dexamethasone in the treatment of hydroallantois in buffaloes. Indian. Vet. J. 68: 1090-1091.

Roberts, S.J. (1971). Veterinary Obstetrics and Genital diseases. 2nd Edn. CBS Publishers and Distributors. p 180.

Selvaraju, M., Manokaran, S., Palanisamy, M., Napolean, R.E. and Ravikumar, K. (2012). Hydroallantois in a she buffalo. Indian J. Anim. Reprod. 33(1): 92-93.

Sloss, V. and Duffy, J. H. (1980). Handbook of bovine obstetrics. Williams and Wilkins, Baltimore, USA.

Srinivas, M. and Sreenu, M. (2006). Hydrallantois with fetal ascites in a Buffalo. Indian Vet. J. 83: 1342-1343.

Vandeplasche, M., Oyaert, W., Bouters, R., Vandenhende, C., Spincemaille, J. and Hermann, J. (1965). Über die Eihautwassersucht beim Rind. Wiener Tierarztliche Monatsschrift. 52: 461.

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