SUCCESSFUL MANAGEMENT OF HYDRALLANTOIS IN A MID-GESTATION GIR COW- A CASE REPORT

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ABSTRACT

A pluriparous Gir cow was presented to the Large Animal Outpatient Medicine Unit of Madras Veterinary College Teaching Hospital with the history of anorexia, distended abdomen and scanty dung for the past one week. On clinical examination, bilateral distension of abdomen was observed. Per-rectal examination revealed severely distended uterus with prominent fremitus. Sonographic examination revealed presence of fluid filled sacs with intermittently moving foetus, cranial displacement of abdominal organs and severe hepatic congestion. The condition was diagnosed as hydrallantois based on per-rectal findings and ultrasound examination. Hence, the pregnancy was terminated using intramuscular injection of Cloprostenol sodium @ 500µg and Dexamethasone @ 24mg. After 20 hours of treatment, the cow had expelled around 80-100 litres of yellowish, serous fluid along with a live 5 months old male foetus without any abnormality or congenital deformity which died within an hour and the cow had recovered imperceptibly.

Key words: Gir cow; Hydrallantois; Trans-abdominal ultrasonography

INTRODUCTION

Hydrallantois is the sudden accumulation of clear, serous and amber coloured fluid in the allantoic sac. It usually develops rapidly within 5 to 20 days of the last trimester of pregnancy (Morrow, 1986). It is associated with a diseased uterus causing structural or functional changes in allantochorion including its vessels. It occurs due to transudation of fluid resembling plasma (Roberts, 1971) due to interference of sodium transport at the cellular level (Jackson, 1980) and increased permeability of the chorioallantoic membrane. Other causes of hydrallantois include foetal renal disease and deficiency of vitamin A which leads to decreased endometrial resistance and become susceptible to infections (Morin et al., 1994). The foetus is usually normal but neither the foetus nor the placentomes can be felt by per-rectal examination and is characterized by distended uterus, round and enlarged abdomen and dehydration. The shifting of fluid from interstitial tissue or cell to cavity might have been responsible for dehydration, sunken eye, dullness and depression (Arthur et al., 1989). Retention of the foetal membranes and septic metritis are the common sequelae. In severe cases, clinical signs of hydrops allantois may occur as early as the 5th month of pregnancy (Roberts, 1971). The present case report depicts the successful termination of a hydroallantois associated pregnancy during fifth month of pregnancy in a Gir cow.

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CASE HISTORY AND OBSERVATIONS

A pluriparous Gir cow was presented to the Large Animal Outpatient Medicine Unit of Madras Veterinary College Teaching Hospital with the history of inappetance, distended abdomen and scanty dung for the past one week. On clinical examination, all vital parameters were found to be with in the normal range except for the bilateral distension of abdomen. On Per-rectal examination, severely distended uterus with prominent fremitus was palpated. Per-vaginal examination revealed one finger dilatation of external os of cervix without any discharge. Sonographic examination revealed fluid filled sacs with intermittently moving foetus in uterus and cranial displacement of abdominal organs and severe hepatic congestion (Fig. 1A). The condition was diagnosed as Hydroallantois based on the findings of per-rectal and ultrasound examination.

TREATMENT AND DISCUSSION

The pregnancy was medically terminated by induction with intramuscular administration of Cloprostenol sodium @ 500µg and Dexamethasone @ 24 mg. Animal was supported with intravenous administration of Ringer lactate @ 10 ml/kg, Normal saline @ 10ml/kg and Calcium borogluconate @ 1 ml/kg and Streptopenicillin @ 15 mg/kg intramuscularly. Within 24 hrs after initation of the treatment, around 80-100 litre of clear, serous allantoic fluid was gushed out of the uterus along with a live male foetus with no abnormality which eventually died within an hour. The Crown rump length of the foetus was calculated as 16 inches and thus the foetal age was calculated to be around 5 to 6 months (Fig. 1B). Haematological parameters and the kidney profile from

both dam and foetus were within the normal range. Lochial sample was collected aseptically for PCR screening of Brucellosis, Campylobacteriosis, Listeriosis and for bacterial culture of E.coli, Proteus, and Klebsiella. Both PCR and culture results were found to be negative. Since it was early pregnancy, it was decided not to manipulate the placenta and four boli of Uromet (Urea+ Nitrofurantoin+ Metronidazole) was placed in-utero. The cow was maintained under fluid and antibiotic therapy to prevent from hypovolaemic shock for the next five days and had an imperceptible recovery.

Fig. 1: A. Trans-abdominal ultrasound showing fluid filled sacs and foetal parts in uterus, B. Foetal Age= 5.6 months

The condition is diagnosed by physical and rectal examination as well as, trans-rectal and trans-abdominal ultrasonography (Morin et al., 1994 and Pridhvidhar et al., 2017). Hydroallantois must be differentiated from hydramnios, intestinal obstruction, ascites, rupture of bladder, abdominal masses like tumour, abscess or fat necrosis, rumen tympany, extensive ventral oedema, hydrometra and multiple foetuses (Morin et al., 1994). Termination of pregnancy is the only choice of therapy in hydrallantois because even if one removes many gallons of this transudate it gets restored within 2 to 4 days. Between 5-8 months of gestation, a combination of PGF2a and dexamethasone (500 µg of cloprostenol and 25 mg of dexamethasone) is necessary to remove both luteal and extra ovarian sources of progesterone (Purohit et al., 2011). Abortion will occur within a mean time of five days (Barth et al., 1981). If the response is poor then caesarean section remains to be the only choice of treatment (Rangasamy et al., 2013). The prognosis is poor and the future fertility is questionable in case of hydrallantois (Roberts, 1971) but early diagnosis prevents the cow from having poor prognosis (Resum et al., 2016). Vigorous fluid therapy helps to prevent the cow from hypovolaemic shock due to fluid loss (Pridhvidhar et al., 2017). Sustained intrauterine antibiotic therapy is needed for the diseased uterus which improves the future fertility of the cow. The present case study is concluded that hydrallantois cases if diagnosed at an early stage and promptly treated, will have a good prognosis and future fertility.

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