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Short Communication

Successful treatment of Hydrallantois in a Crossbred Jersey Cow - A Case Report

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ABSTRACT

Hydrallantois is a substantial agglomeration of fluid in the allantioc sac. It accounts for about 85-90% of the dropsical condition, which shows detrimental effect on bovine foetus and its membrane. Hydrallantois or hydropsy allantois is a sporadic pregnancy disorder reported in dairy animals. It is defined as severe and extensive edema of the fetal membrane, and incidence is noticed mainly in cattle, but sparsely spotted in sheep, pigs and carnivores. A case of such hydrallantois was presented with rounded abdominal distension for the past 5 days, for which the pregnancy termination was advocated using hormones, corticosteroids and fluid therapy. Furthermore, a complete recovery of the cow was noticed without any untoward consequences.

Key Words: Abdominal Distension, Allantoic Fluid, Corticosteroids Hydrallantois, , Placentomes.

INTRODUCTION

Hydrallantois is conventionally regarded as the maternal abnormality, where swift and unusual enlargement of abdomen occurs (Drivers and Peek, 2008) due to accumulation of watery, amber color fluid inside the allantoic cavity for 5 to 20 days in the late trimester, which invariably indicate twin/triplet pregnancy. In dairy cattle, hydrallantois to a greater extent is frequent in terminal phase of third trimester and not so much in buffaloes and heifers (Srinivas and Sreenu, 2006). It is over and over associated with either infectious disease or developmental imperfections of fetus (Kumar *et al,* 2019). It is customarily combined with a diseased uterus, where greater number of caruncles in one uterine horn were non-functional and further reduced in size. The remaining placentomes has become larger in size, inflamed and perhaps defective, which out-turn in the genesis of adventitious placenta (Drost, 2007). The steady and incessant removal of allantoic fluid might be a possible technique to keep away from shock to the animal (Noakes *et al,* 2009). Hydrallantois is one of the gestational disorderliness, that sequel because of production surge of a fluid that bear a resemblance to blood plasma within the allantoic sac (Kapadiya *et al,* 2018). The present case exhibited the successful gynaecological management of hydrallantois in a crossbred jersey cow.

CASE HISTORY AND OBSERVATIONS

A 7th month pregnant crossbred jersey cow, which was aged 5years and is in its 2nd parity was presented to the department of Veterinary Gynaecology and Obstetrics, College of Veterinary Science, Garividi one month ago with a complaint of bilateral abdominal distension (Fig. 1) coupled with decreased appetite for 5days. On clinical examination, the abdominal distension was rounded as well as the entire vital parameters were within the standard range. On per rectal palpation, enlarged and fluid filled uterus and unable to palpate the fetus and the placentomes. The fluid filled uterus inhabited the complete abdominal and pelvic cavity. Per Vaginal examination divulged the closed external os of cervix. Hematological and biochemical

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Fig 1: Bilateral abdominal distension

Fig 2: Dead male foetus

parameters were within the accustomed scale, except for the mild anemia. Taking the history, per rectal and per vaginal findings into consideration, it was pronounced as a case of hydrallantois and decided to terminate the pregnancy.

TREATMENT AND DISCUSSION

Pregnancy termination with the aid of hormonal drugs and corticosteroids was done. In the first instance, Inj. Cloprostenol sodium (Pragma® 500µg) and Inj. Dexamethasone sodium phosphate (Dexona ® 40mg) were administered intramuscularly along with intravenous fluid therapy (3 litres of Dextrose normal saline). There was gushing of watery, amber colored fluid succeeding 48 hours of initial treatment, followed by a slight traction to relieve the fetus, which was identified as a dead male fetus (Fig. 2). The animal was post-operatively kept on antibiotics, analgesics and fluid therapy for 5 days, which facilitated an uneventful recovery.

In the early stage of case admission, the cow was not gravely distressed with hydrallantois and was capable enough to walk. For this reason, it was decided for induction of parturition. Hydrallantois manoeuvring pivot on time span and gravity of the condition (Rangasamy *et al,* 2013). Superfluous allantoic fluid buildup in hydroallantois context conclude in acute abdominal distension and at time with deterioration of condition, which might upshot in fatal recumbency of the dam (Noakes *et al,* 2009). The practicable differentials of hydrallantois are hydramnios, intestinal obstruction, ascites, bladder rupture, tumor like abdominal growths, abscess or fat necrosis, bloat, substantial ventral dropsy, hydrometra and existence of more than one foetus. Traditional medical attention necessitates pregnancy termination utilizing prostaglandin $F_2\alpha$ and corticosteroids (Manokaran *et al,* 2011), which was employed in the current case. In general, subsidiary fluid therapy is highly imperative with gentle and uninterrupted evacuation of the immoderate allantoic fluid to abstain from hypovolemic shock, which might be attributed to instantaneous expulsion of allantoic fluid during the pregnancy termination procedure (Kumar *et al,* 2012). Miscellaneous protocols were put to use for inducing parturition in cattle diagnosed as hydrallantois involves the usage of natural or industrially manufactured synthetic prostaglandin $F_2\alpha$ (Manokaran *et al,* 2011) or sole administration of estrogen hormones (Peiro *et al,* 2007). The major sequelae of hydrallantois

condition is observed to be retention of placenta, which puts the dam at risk of metritis, with long-drawn-out recuperation and impeded conception rate (Noakes *et al,* 2019), but no such issues were noticed in the present case.

CONCLUSION

The contemporary case of a cow with hydropsy allantois was fruitfully dealt with therapeutic termination of pregnancy with the help of hormones like prostaglandins ($PGF_2\alpha$) and corticosteroids like dexamethasone. In this case, the cause for hydrallantois was highly attributed to defective placenta. Prompt intervention and medicaments facilitated uneventful recovery of the dam.

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