

CASE REPORT

Management of Hydroallantois in a Non Descriptive Cattle: A Case Report

Manjusha G. Patil¹, Gurunath Berule², Pankaj Hase³,
Damini Mankar⁴, Devashish Bawaskar⁵

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ABSTRACT

A rare case of hydroallantois was diagnosed in a second parity non descriptive cattle based on bilateral abdominal distension. On general clinical examination the vitals were within normal range except for the increased respiratory rate. Per rectal examination revealed fluid filled uterus that is fully distended throughout the pelvic cavity. No foetal parts and placentomes were palpable. Per vaginal examination revealed closed cervix. The animal was successfully treated through induction of parturition, controlled allanto-centesis for removal of excessive fluid, supportive medical therapy and fluid replacement. After induction of parturition administration of intravenous fluids, broad spectrum antibiotics, and non steroidal anti inflammatory drugs to prevent secondary infection. Recovery was uneventful and the animal retained reproductive efficiency. This case highlights the importance of early diagnosis and timely therapeutic intervention in the successful management of hydrallantois in cattle.

KEYWORDS

• Hydroallontois • Non Descriptive Cattle • Induced Parturition • Reproductive Efficacy

AUTHOR'S AFFILIATION:

¹ Professor and Head (ARGO), Department of Animal Reproduction, Gynaecology and Obstetrics, COVAS, Parbhani, India.

² PG Scholar, Department of Animal Reproduction, Gynaecology and Obstetrics, COVAS, Parbhani, India.

³ Assistant Professor, Department of Veterinary Clinical Medicine, Ethics and Jurisprudence, COVAS, Parbhani, India.

⁴ PG Scholar, Department of Animal Reproduction, Gynaecology and Obstetrics, COVAS, Parbhani, India.

⁵ PG Scholar, Department of Animal Reproduction, Gynaecology and Obstetrics, COVAS, Parbhani, India.

CORRESPONDING AUTHOR:

Manjusha G. Patil, Professor and Head (ARGO), Department of Animal Reproduction, Gynaecology and Obstetrics, COVAS, Parbhani, India.

E-mail: drmanjushapatil121@gmail.com

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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. This is more common during last phase of third trimester in cattle and buffalo (Kumar *et al.*, 2012). It is characterized by a rapid accumulation of clear, watery and amber colour allantoises fluid resulting in rapid abdominal enlargement within 5-20 days of the late gestation (Report, 1971). 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 and umbilical cord torsion also cause hydrallantois (Kapadiya *et*

al., 2018). The present report described a case of hydrallantois and its management in 5 year old cow in 7 month of pregnancy.

CASE HISTORY AND OBSERVATION

A seven month pregnant cow was presented to the Veterinary Clinical Complex College of Veterinary Science, Parbhani with the history of reduction in appetite, difficulty while lying down and bilateral abdomen distension since 5-10 days. On general clinical examination the physiological parameters were within normal range i.e., temperature: 101.8F, mucus membrane : slightly congested, heart rate: 80 beats per min and increased respiratory rate of 38 breaths per min. Bilateral abdominal distension was so prominent (figure 1 and 2). Upon per rectal examination, fluid filled uterus which is fully distended than normal throughout the pelvic cavity was palpated. No foetal parts and placentomes were palpable. Per vaginal examination revealed closed cervix. Based on the clinical sign, per rectal, vaginal examination the case was diagnosed as hydrallantois.



Figure: 1 and 2 Bilateral Abdominal Displacement in Non descriptive cow

TREATMENT AND MANAGEMENT

Therapy was aimed at termination of pregnancy using hormonal preparation. Parturition was induced by using inj. Dinoprost tromethamine 25 mg (lutalyse),

i/m and inj. Dexamethason sodium phosphate 40 mg, i/m. The animal was kept under observation for 2-3 days. After 24 hours, animal showed sign of parturition and there was two finger dilatation. Almost 80-90

liters of amber colored fluid was drained and the cervix was fully dilated with expulsion of dead fetus after 48 hours of termination. Fluid therapy was administered to counteract hypovolemia. Supportive treatment was also given to prevent secondary bacterial infection. Injection tribivet 10 ml were administered intramuscularly. The treatment was continued for five days following expulsion of fetus. The cow recovered uneventfully.

DISCUSSION

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 last trimester of pregnancy of cattle and buffalo (Roberts, 1971). Similarly, in the present case the condition was seen in 7 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 PGF₂ alpha 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.

CONCLUSION

The case showed that hydrallantois in a cow is a serious condition caused by abnormal placenta and rapid fluid buildup in the uterus. Early diagnosis and quick treatment helped to save the cow, though the calf could not be saved. Good postoperative care supported full recovery. This report highlights the need for early detection and timely management to protect the life and future fertility of affected cows.

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