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## Successful management of Hydroallantois in a goat (*C. Hircus*)

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### Abstract

An uncommon instance of hydrallantois in a goat with a history of a full-term pregnancy was presented at the veterinary clinical complex of college Jaipur. It was noted that the animal had anorexia symptoms, respiratory distress, bilaterally distended abdomen, and inability to rise and move. Animal had been struggling for six to seven hours. On ultrasonographic examination, the accumulation of fluid was seen to have a membrane-like structure without any discernible structure. For the purpose of inducing labour and treating shock, fluid therapy, prostaglandin (cloprostenol), and dexamethasone were provided. One foetus that wasn't viable was delivered. 6-7 litres on average of allantoic fluid were eliminated.

**Keywords:** Goat, hydroallantois, trans abdominal ultrasonography, prostaglandin

### Introduction

Hydroallantois is a placental dropsical condition brought on by abnormal accumulation of a significant amount of allantoic fluid in the uterus of pregnant animal over a period of 5–20 days in the third trimester of pregnancy. This condition is characterised by progressive bilateral abdominal distension, respiratory distress, depression, a propensity to adopt a recumbent posture, and difficulty standing and walking. Bovine, Bubaline, and horse cases have been documented often, while ovine, canine, and caprine cases have only seldom been reported (Milton *et al.*, 1989; Kumar *et al.*, 2012; Feliciano *et al.*, 2013) <sup>[1, 2, 3]</sup>.

Hydrallantois physiopathology is connected to the reduced placental vascularization, which causes placental tissue to undergo metabolic alterations, and membranes of the foetus and a buildup of foetal fluid. These results were seen in ovine clones (Loi and others, 2006) <sup>[4]</sup>.

The case of Hydroallantois described in the article was uncommon, and its successful therapeutic obstetrical management involved a non-descriptive goat.

### Case history and clinical observation

A 4-year-old non-descriptive doe with a history of full-term pregnancy appeared with acute bilateral abdominal distention, anorexia, respiratory discomfort and difficulty rising. A discharge of a brownish-yellow fluid is present. The animal appeared gloomy and downcast. The physiological limits were met for the physiological parameters such as respiration rate, pulse rate, and rectal temperature. By using ultrasound technology, fluid-filled uterine horns with diminishing placentomes were discovered. This case was diagnosed to be a case of hydrallantois based on the history, symptoms, and Tran's abdominal ultrasonographic observations.

### Treatment

It was chosen to induce parturition due to the patient's clinical circumstances and the proximity to the parturition. Prostaglandin 1ml (250 µg) and 20 mg of dexamethasone were administered to the goat. Cervix was dilated 3 hours after induction of labour. The simultaneous administration of 500 ml of Normal saline and 500 ml Ringer's lactate intravenous fluid helped prevent shock brought on by the abrupt release of allantoic fluid. Following removal of 6-7 litre of allantoic fluid. Simple traction was used to deliver the typical foetus that was dead. Following delivery of the foetus, injections of calcium borogluconate (150 ml, i/v) and oxytocin (20 IU, i/v) were given.

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Enrofloxacin (250 mg, i/m) and Chlorpheniramine maleate (2 ml, i/m) were all administered to the animal for 5 days. Herbal preparation of uterine ecboic (Susp. Himrope 30 ml per kg) was given for next 3 days.

### Results and Discussion

According to Mary and David (2009)<sup>[5]</sup>, the normal allantoic fluid volume in sheep and goats ranges from 0.5 to 1.5 litres. In cases of hydroallantois in sheep and does, 6 to 18 litres of amniotic fluid have reportedly been removed (Philip *et al.*, 2012)<sup>[6]</sup>. Although the specific origin of hydrallantois is unknown, it has been linked to consumption of legumes with high oestrogen levels, hypothyroidism, and uterine or placental illness (Mobini *et al.*, 2002)<sup>[7]</sup>. Insufficient caruncle numbers have been suggested as the cause of the aberrant functioning of placentomes (Misri, 2001)<sup>[8]</sup>. The lack of caruncles associated with hydroallantois may be caused by a uterine condition that develops later in life or a congenital deficiency in development (Peek, 1997)<sup>[9]</sup>.

For ewes and does with hydroallantois, physical examination and Trans abdominal ultrasonography are advised (Bhattacharyya *et al.*, 2012)<sup>[10]</sup>. Trans abdominal ultrasonography (5 MHz) was used in the current case to make a certain diagnosis of hydroallantois. It was unclear what caused this ewe hydrallantois. It is impossible to ignore hormonal abnormalities brought on by ingesting phytoestrogens in the pasture (Adams *et al.*, 1981)<sup>[11]</sup>. According to Morin *et al.* (1994)<sup>[12]</sup>, the majority of foetuses in animals with hydrallantois are underdeveloped, have congenital abnormalities, or appear normal but are not viable. In the present case, one non-viable foetus was seen.

### Conclusion

It's a disease where rapid enlargement of abdomen occurs within 5 to 20 days of gestation due to accumulation of allantoic fluid in large amount. The foetus is not palpable in this situation. So diagnosed via trans abdominal ultrasonography and treated with cloprostenol (PGF<sub>2α</sub>) and given supportive therapy.

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