CASE REPORT

Hydroallantois in a Gir Cow: A Case Report

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Hydroallantois is a pathological condition characterized by excess accumulation of allantoic fluid in the allanatois during fetal development. Usually, maternal factors are involved, where rapid and abnormal distension of the abdomen occurs (Drivers Peek, 2008). If the case is not diagnosed and treated early and the animal cannot rise, the prognosis is poor. In dairy cattle, hydroallantois is more common in the last phase of the third trimester and less so in buffaloes and heifers (Kumar *et al.,* 1988; Srinivas and Sreenu, 2006). The physiopathology of hydroallantois reduces placental vascularization resulting in metabolic changes in the placental tissue and fetal membranes, thereby accumulating fetal fluids (Kapadiya *et al*., 2018).

History and Clinical Observations

An 8 years old Gir cow at 8th month of gestation was reported in the field with a history of sudden bilateral enlargement of the abdomen within the last 15 days (Fig. 1). The animal was unable to sit down and had loss of appetite and difficulty in urination. The case was treated as bloat by a local quack without success.

The general clinical examination revealed a dry muzzle, anxiety, dullness, shrunken eyes, and congested mucous membrane. The pulse rate, rectal temperature, and respiratory rate were 84/minutes, 101.2° F, and 30/min, respectively, with heavy bilateral distension of the abdomen. Per rectal examination revealed distended fluid-filled uterus occupying abdominal and pelvic cavities. No fetal parts were palpable in the fluid-filled uterus. Per vaginal examination revealed a closed cervix. Based on the history, clinical observations, and symptoms, the case was diagnosed as hydroallantois, and it was decided to induce parturition with medicinal management.

Therapeutic Management and Discussion

Parturition was induced by using inj. Dexamethasone sodium phosphate (Dexona) 40 mg, Intravenous (i/v) and Inj. Cloprostenol (Pregma) 500 mg, intramuscularly (i/m) on the day of examination. Fluid therapy and supportive treatment with Inj. Oxytetracycline 10 mg/Kg b.wt., i/v Inj Nuroxin M 15 mL i/v was also given to prevent the secondary bacterial infection. After 24 hours of induction, the animal showed signs of parturition. The water bag ruptured naturally, and about 80–100 liters of watery amber-colored fluid drained out from the gravid uterus. After complete removal of allantoic fluid, a dead fetus was palpable that was delivered by traction. It was a partially dehydrated defective female fetus (Fig. 2). The placenta was removed manually after 26 hrs. Besides this, intravenous fluid therapy was continued with 5% dextrose normal saline 12 liter and Ringer lactate solution 4 liter along with injection Dexona 10 mL administered intramuscularly to avoid hypovolemic shock due to sudden escape of allantoic fluid. Antibiotic Oxytetracycline 10 mg/Kg b.wt., i/v, and injection of Flunixin meglumine 1.1 mg/Kg b.wt. i/v were administered along with oral rumen tonics. The same treatment was continued for the next 4 days. Bolus Furea Plus comprising nitrofurazone, metronidazole, and urea was placed in the uterus after removal of the placenta. The animal recovered uneventfully (Fig. 3).

The handling of hydroallantois varies with the duration and severity of the condition (Rangasamy *et al*., 2013). Hydroallantois must be differentiated from hydramnios, intestinal obstruction, ascites, rupture of bladder, abdominal masses like tumour, abscess or fat necrosis, rumen tympany, extensive ventral edema, hydrometra, and multiple foetuses (Morin *et al*., 1994). Hydroallantois is seen mostly in 8-9 months of pregnancy (Roberts, 1971). In the present case, the condition was seen at 8th month of pregnancy. Excessive fluid accumulation in hydroallantois condition results in abdominal distension and sometimes loss of condition and recumbency with consequences of fatality in the dam (Noakes *et al*., 2009).

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Fig 1: Bilateral enlargement of abdomen

Fig 2: Female fetus delivered by traction

Fig. 3: Sinking of the tense abdomen and normal feeding and watering after parturition

Induction of parturition was successful by using a single dose of Dexamethasone 40 mg i/v and Cloprostenol 500 mg i/m. Veterinarians have followed different treatment protocols like use of PGF2α preparations, dexamethasone, and estrogens to induce parturition in cattle and buffaloes (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 (Kumar *et al*., 2012). In the present case, after induction of parturition allantoic bag ruptured naturally, and allantoic fluid started to flow out rapidly. To prevent hypovolemic shock, supportive fluid therapy and injection dexamethasone were given.

It can be inferred that timely diagnosis, fluid therapy, and medicinal treatment can save the life of cattle affected with hydroallantois.

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