MANAGEMENT OF HYDROALLANTOIS IN A NON DESCRIPTIVE COW

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ABSTRACT

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A case of hydroallantois in a non - descript cow and its successful therapeutic management has been reported.

Key words: Hydroallantois, Non - Descript cow, Caesarean

INTRODUCTION

Hydroallantois or hydrops of the allantois is the single factor present in 85 to 90 per cent of the dropsical conditions affecting the bovine fetus and its membrane (Peek, 1997). It is usually seen sporadically in dairy and beef cattle. It is usually associated with a diseased uterus in which most of the caruncles in one horn are not functional and rest of the placentomes are greatly enlarged and possibly diseased (Roberts, 1971). Portions of placenta may be necrotic and oedematous. Presence of cystic kidney, hydronephrosis of foetus might be concerned in the pathogenesis of hydrallantois. The clinical case of hydroallantois and its management in a non-descript cow presented in this report.

CASE HISTORY AND OBERVATION

A non-descriptive pluriparous cow, around 360 kgs was brought to Madras Veterinary College Teaching Hospital with a history of full term pregnancy and spontaneous milk let down for the past three days. On general examination, bilaterally distended abdomen and bloated bull frog appearance was noticed. On rectal examination, fremitus was very sluggish and the uterus was fully distended into the abdominal cavity, fetus and placentomes were not palpable. On vaginal examination external os of cervix was one finger dilated and mucoid discharge was noticed. Ultrasonography revealed echogenic placentomes, umbilical cord, anechoic foetal fluids. However fetal parts were not visualized. The condition was interpreted as hydroallantois.

TREATMENT AND DISCUSSION

Initially the animal was treated with synthetic $PGF_{2\acute{a}}$ Inj.Cloprostenol 500 µg along with Dexamethasone 24 mg intramuscularly, which produced weak response on cervical dilatation. Subsequently, on the third day the external os of cervix had four fingers and internal os two fingers dilatation. Again the animal was treated with second dose of $PGF_{2\acute{a}}$ I/M, Calcium borogluconate 150 to 200 mg/kg body weight and oxytocin 60 IU intravenously. To compensate loss of fluids DNS 2500 ml and RL 2500 ml administered intravenously. In order to combat bacterial infection Enrofloxacin was administered at the dose of 5mg/kg body weight intramuscularly. Albeit of all these, on the fifth day also there was no appreciable improvement on cervical dilation.

Caesarean section was performed as per standard technique in standing position and an emphysematous foetus was removed. The animal was treated with intravenous fluid (Inj. DNS 3000 ml and RL 3000ml morning and evening), antibiotic (Inj. Ceftriaxone 4 gm BID), antihistamine, anti-inflammatory and anti pyretic.The animal developed myositis, peritonitis and finally collapsed after ten days of post-operative treatment. Apparently hydroallantois is caused by structural or functional changes in the allantoic chorion including its vessels with transudation and collection of fluid, differing from normal allantoic fluid but resembling plasma. The cause of hydroallantois is not certain. Adventitious placentae are commonly present and there

may also be a deficient number of caruncles. This deficiency may be due to either a congenital lack of development or uterine disease acquired in later life. A reduction in the number of cotyledons has also been associated with hydroallantois (Peek, 1997). Decreased active transport of sodium across the chorioallantoic membrane, increased permeability of the chorioallantoic membrane, hormonal imbalances, fetal renal disease, multiple foetus in the uterus, fetal liver disease, uterine torsion or twisting of the umbilical cord, deficiency of vitamin A causing decreased endometrial resistance to infections, malnutrition conditions and heart or renal diseases may contribute the hydroallantois process (Morin *et al.,* 1994).

The handling of hydroallantois case varies with the duration and severity of the condition. It may be undiagnosed until the time of abortion in mild cases, premature birth or at normal parturition. Excessive volume of fluid is observed accompanied by the presence of a poorly viable, small or defective fetus. Clinical sings are sudden enlargement of abdomen during last stage of gestation and bloated bull frog appearances in severe cases. Barter (1986) reported that in hydroallantois, the parturition was abnormal because of incomplete cervical dilatation with primary uterine inertia and lack of strong abdominal contractions. The foetal death and failure of cervix to dilate in this case was in agreement with the above author. Hydroallantois must be differentiated from hydroamnios, 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). For treatment protocol, early treatment with higher dose of antibiotic, ecbolic like oxytocin and $PGF_{2á}$ is best one (Sharp *et al.,* 1978). To compensate fluid loss simultaneous administration of intra venous fluids and to remove the fluids from the allantoic cavity is advisable. Complications of hydroallantois are retained placenta and septic metritis. It may be concluded that early diagnosis and prognosis is very important for hydroallantois cases.

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