Case Report

DYSTOCIA DUE TO INCOMPLETE CERVICAL DILATATION WITH FETAL HYDROCEPHALUS, BRACHYGNATHISM, CLEFT PALATE AND ANKYLOSIS OF LIMBS IN A SALEM BLACK DOE

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ABSTRACT

A full term pregnant 1 ½ year old Salem Black doe was presented with the history of dystocia. Due to incomplete cervical dilatation by cesarean section hydrocephalic fetus with multiple congenital disorders was delivered and complete recovery of doe was reported after a week.

Key words: *Dystocia, Fetal Hydrocephalus, Brachygnathism, Cleft Palate, Cesarean section.*

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INTRODUCTION

Incomplete cervical dilatation at the time of parturition is called as ring womb and it is more common in small ruminants than other farm animals. The young animals is most commonly affected by ring womb and the exact etiology still unknown but the predisposing factors are many (Singh *et al.,* 2017). Soft tissue swelling due to increased fluid accumulation is termed as dropsy and this condition is grouped into three categories viz. maternal placental dropsy, fetal placental dropsy and fetal dropsy. Aforesaid conditions occur alone or in combination and increases the diameter of the fetus due to fluid accumulation causes dystocia (Noakes *et al.,* 2019). Hydrocephalus is dropsy of the fetal head more frequently reported in cattle and is not common in goat (Sharma *et al.,* 2017). The affected fetus born as dead or die shortly after the live birth due to cerebral defect (Selvaraju *et al.,* 2020a). Incidences of dystocia due to hydrocephalus alone reported in cow (Palanisamy *et al.,* 2007 and Prakash *et al.,* 2016), goat (Selvaraju *et al*., 2006) but the present communication puts record on incidence of dystocia due to secondary uterine inertia with multiple fetal abnormality such as

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hydrocephalus, brachygnathism, cleft palate and ankylosis of limbs in a Salem Black Doe.

CASE HISTORY AND OBSERVATION

A 1 ½ year old Salem Black doe on its first term was brought to VCC, Veterinary College and Research institute, Namakkal for fetal delivery with the history of continuous unproductive abdominal straining and water bag had ruptured 6 hours back. On clinical examination temperature, respiration rate and heart rate were normal. Vaginal examination revealed three finger cervical dilatation and it was hard in consistency. Further, examination of the fetus revealed presence of fluid fluctuating fetal parts with disintegrated bones. Based on the history and vaginal examination the case was diagnosed as dystocia due to secondary uterine inertia with abnormal fetus.

TREATMENT AND DISCUSSION

Secondary uterine inertia with prolonged second stage of the labour requires cesarean section as the pervaginal delivery was not advisable due to the highly fragile reproductive tract of small animals. Hence, it was decided for 'C' section. Before the initiation of surgical procedure, the animal was treated with inj. Ringer's lactate 100 ml, inj. Dextrose normal saline 100 ml and inj. Ceftrioxone 300 mg intravenously and inj. Tetanus toxoid 0.5 ml intramuscularly. Then the animal was restrained on its right lateral recumbency and inverted L block was achieved by using 2% lignocaine at the rate of 1:1 with normal saline followed by the aseptic preparation of surgical site. A dead male fetal monster was relieved by cesarean with left oblique approach (Fig.1) and post operatively inj. Oxytocin 20 IU and inj. Meloxicam 15 mg administered intramuscularly. Normal feeding behavior and complete recovery was reported by the owner six days later.

Enlarged cranium with excess fluid accumulation and brachygnathism was noticed on gross examination of the fetus (Fig.2). Floating of disaggregated bony plates within the cranium and ankylosis of all the limb joints observed on palpation. Radio graphical study shows brachygnathism and fluid accumulation in the brain (Fig.4). Postmortem examination indicated the cleft palate in the affected fetus (Fig.3).

Primary site for cerebrospinal fluid production is ventricle choroid plexus of the brain and it act as transporting medium for hormones and metabolites between the brain and blood (Selvaraju *et al.,* 2020a). Impairment in the homeostasis of cerebrospinal fluid (CSF) formation and drainage system during fetal stage leads to excessive accumulation of fluid in the subarachnoid space or ventricular system which causes cranial enlargement. Accumulation of CSF in the cerebral ventricle is called as internal hydrocephalus and accumulation of the fluid outside the brain is known as external hydrocephalus (Selvaraju *et al.,* 2020b). Increased intracranial pressure, convulsion, mental disability and fetal death are common outcome of this condition and various etiological factors involved in dropsical condition of the fetal head which includes genetic factor, environmental factor, deficiencies and uterine infection (Vahora *et al.,* 2020). Presence of fetus in anterior presentation favored the diagnosis of this condition (Sasi *et al.,* 2020) and delivery of

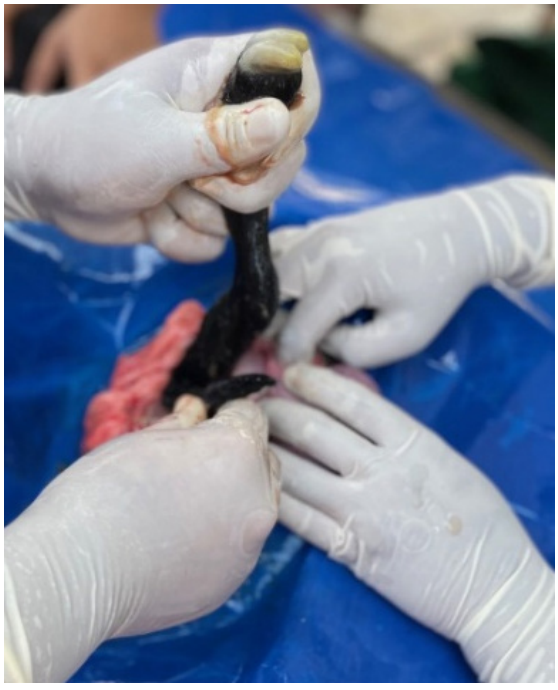

Fig.1 Fetal delivery after C section

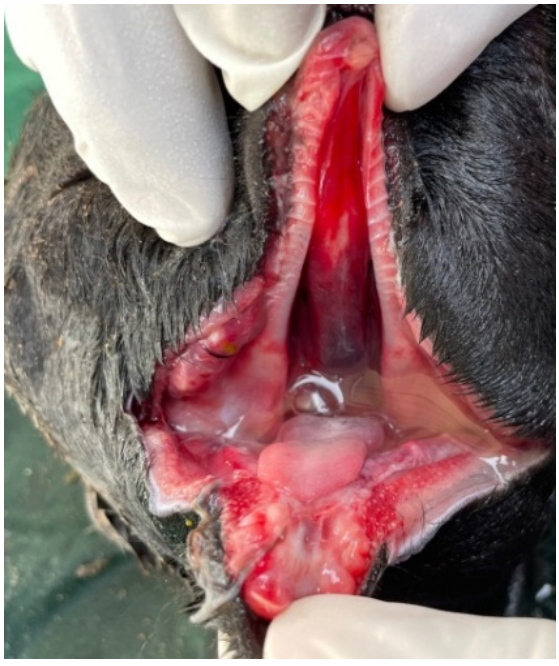

Fig. 3 Cleft palate condition noticed on postmartum examinatin

Fig.2 Fetal Hydrocephalus with Brachygnathism

Fig.4 Radio-graphical examination revealed Brachygnathism and excessive fluid accumulation in cranium

the fetus related to severity of the condition. In mild degree hydrocephalic fetus simple traction alone favored fetal delivery (Selvaraju *et al.,* 2020b). In severe cases of hydrocephalus different methods were reported by various authors which includes forced extraction, cesarean (Selvaraju *et al.,* 2020a) and excision of the head (Ravikumar *et al.,* 2013). In the reported case the water bag ruptured 6 hours back, the cervical dilatation was incomplete. Hence to save the dam and to avoid much damage to reproductive tract the 'C' section was performed and animal recovered uneventfully due to proper post-operative care.

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