PER-VAGINAL DELIVERY OF AN EXTERNAL HYDROCEPHALIC CALF IN A BUFFALO-A CASE REPORT

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ABSTRACT

A case of congenital external hydrocephalus in a Murrah buffalo calf and its successful therapeutic management has been reported.

Key words: Hydrocephalus, congenital, dystocia, buffalo

INTRODUCTION

Hydrocephalus involves swelling of the cranium due to accumulation of fluid, which may be in the ventricular system or between the brain and the dura. It affects all species of animals and is seen most commonly in pigs, puppies and calves. In more severe form of hydrocephalus there is marked thinning of the cranial bones (Noakes *et al.*, 2009). The condition is assumed to arise from disturbances in normal circulation of cerebro-spinal fluid resulting from altered production and or absorption (Friede, 1975). The condition is well documented in cattle (Purohit *et al.*, 2006; Jana and Ghosh, 2010), mare (Kumar *et al.*, 2010) and buffalo (Kumaresan *et al.*, 2003). The present case report deals with dystocia due to hydrocephalic calf and its successful per-vaginum delivery.

CASE HISTORY AND OBSERVATIONS

Three year-old primiparous Murrah buffalo (Case no.: 8-1148) at full term was brought to Teaching Veterinary Clinical Complex, Hisar 12 hours after the onset of straining and rupture of water bag. No fetal parts were seen outside the vulva. Per-vaginal examination after proper lubrication revealed a fetus with enlarged, fluctuating fluid filled sac like structure adjoining the head obstructing the birth canal and extended forelimbs in anterior longitudinal presentation within the birth canal. Absence of palpebral and suckling reflex revealed the fetus as dead. The fetus was diagnosed to be congenital hydrocephalus.

TREATMENT AND DISCUSSION

The buffalo was given caudal epidural anaesthesia using 5 ml of 2% lignocaine hydrochloride and ample lubrication of birth canal with sodium carboxy-methyl-cellulose gel. Per-vaginal examination of fetal head revealed a soft and fluctuating fluid filled swelling with absence of bones on the skull. The case was tentatively diagnosed as congenital fetal hydrocephalus. Forced traction was unsatisfactory to deliver the fetus. A stab incision was made per vaginum in the enlarged portion and fluid oozed out leading to reduction in the size of the head. A dead fetus was delivered with mild and gentle traction. The placenta was expelled six hours after delivery of the dead fetus. The animal was advised routine post operative drugs treatment for next five days. Gross examination and dissection of head of fetus revealed absence of cranial bones and a skin pouch on head (Fig.) which was filled with cerebrospinal fluid. Based on the above findings, the present case was diagnosed as congenital external hydrocephalus.

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In the present case, a sac found connected to the missing bone of the cranium was filled with fluid and resulted in dystocia. A simple autosomal recessive gene (Roberts, 1971) and autosomal dominant gene with incomplete penetrance (Leipold and Dennis, 1986) have been reported to be linked with hydrocephalus in cattle. The condition could also be inherited with co-existing hypovitaninosis-A (Jubb and Kennedy, 1970). Severe form of hydrocephalus results in dystocia and that can not be relieved by mutation and forced traction. The excessive bony enlargement of cranium may require fetotomy (Roberts, 1971). However, in the present case the fetus was relieved successfully by incising the soft portion of hydrocephalic head and thereby reducing the fetal size.

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Fig. External hydrocephalic buffalo calf ( ) showing absence of cranial bones and fluid within the cranium