SUCCESSFUL PERVAGINAL DELIVERY OF A SEVERE HYDROPERITONEAL FETUS IN A BUFFALO

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ABSTRACT

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A graded buffalo at fourth calving was presented with the history of persistent straining and unable to deliver the fetus. Clinical examination revealed dystocia due to posterior presentation with severe fetal hydroperitoneum. Successful pervaginal delivery was carried out by obstetrical mutation, abdominocentesis and controlled traction. Post mortem examination with histopathological study revealed hydronephrosis with tubular degeneration.

Key words- Hydroperitoneum, Posterior Presentation, Dystocia, Buffalo, Hydronephrosis

INTRODUCTION

Dystocia due to fetal hydro peritoneum is rarely observed in many species but it is most common in cows (Hoparkhe *et al.,* 2003). Hydroperitoneum may occur due to developmental anomaly in fetus that could lead to obstruction of lymphatics and imperfect drainage of peritoneal fluid (Jubb and Kennedy, 1980). Sometimes, over production and insufficient removal of peritoneal fluid may result in hydroperitoneum (Sluss and Duffy, 1980). Hydroperitoneal fetus if carried to term may cause dystocia (Arthur, 1986). In the present communication, a complicated case of dystocia due to severe hydroperitoneal fetus in a buffalo and its successful obstetrical management is reported.

CASE HISTORY AND OBSERVATIONS

A graded buffalo at fourth calving with the history of water bag rupture 12 hours earlier and unable to deliver the fetus despite of severe straining was presented to LAC Obstetrics unit of Madras Veterinary College Teaching Hospital. The case was previously attended by a local veterinarian but failed to deliver the fetus. Physical examination revealed all the vital parameters were within normal range. Under low caudal epidural anesthesia with 4ml of 2% lignocaine Hcl. pervaginal examination revealed a fetus presented in posterior longitudinal (P1), left dorso-ilial (P2) with unilateral hock (right) flexion (P3). Initially the birth passage was thoroughly lubricated with carboxymethyl cellulose solution. The hock flexion was corrected, both the hind legs were secured using nylon snares and traction was given. No progress of fetus was observed. Careful exploration revealed a highly distended abdomen with fluid accumulation. The case was diagnosed as dystocia due to fetal hydroperitoneum.

TREATMENT AND DISCUSSION

Under low caudal epidural anesthesia with 4ml of 2% lignocaine Hcl the correction procedure was done. As water bag had ruptured twelve hours before, birth passage was dry due to complete loss of fetal fluids and the fetus was tightly impacted with the uterus. To create buoyancy two liters of luke warm carboxy methyl cellulose solution was introduced into uterus. The fetal skin along with peritoneum was punctured in paraventral region with help of a long

obstetrical hook. About twenty five liters of clear, straw colored watery fluid was drained out from fetal abdomen. Upon forced traction a dead male fetus was delivered(Fig.1). The dam was administered with two liters of Inj.5% DNS (I/V),inj. Streptopenicillin 2.5 g (i.m),inj. Oxytocin 30 I.U (i.m) , inj. Chlorpheniramine maleate 10ml (i.m) and inj. Meloxicam 10ml (i.m). The recovery of the cow was uneventful. Post mortem examination of fetus revealed edematous right kidney. Histopathological analysis revealed loss of tubular epithelium and degeneration of tubules with edema (fig-2).

Dystocia due to fetal hydroperitoneum is occasionally observed in buffalo. Fetal hydroperitoneum with anterior presentation of fetus has been reported in buffalo by Palanisamy *et al.,* (2007). In this case Carboxy methyl cellulose solution was used as a substitute for amniotic fluid to provide lubrication. Along with lubrication it also provided buoyancy to the fetus which makes the mutation process easier. The fetal hydroperitoneum might be due to obstruction of lymphatics or over production and insufficient removal of peritoneal fluid or some condition like congenital nephritic kidney, dysplastic liver, congenital cardiac and lung disorder. In the present case the probable etiology could be related to hydronephrosis. In normal histological study of kidney, the proximal and distal convoluted tubules surrounding the renal corpuscles could be well demarcated where as in the present case, degeneration of tubules with very faint demarcation between the tubules could be visualized. The space between the visceral and parietal layer of renal corpuscle was more than that observed in normal kidney. Similar findings were reported by Kumaresan *et al.,* (2013). In conclusion, a prompt diagnosis with meticulous obstetrical manuveour would provide the dam a better chance of future fertility and avoids economic loss to the farmers in terms of dam mortality.

Fig 1. Hydro peritoneal fetus

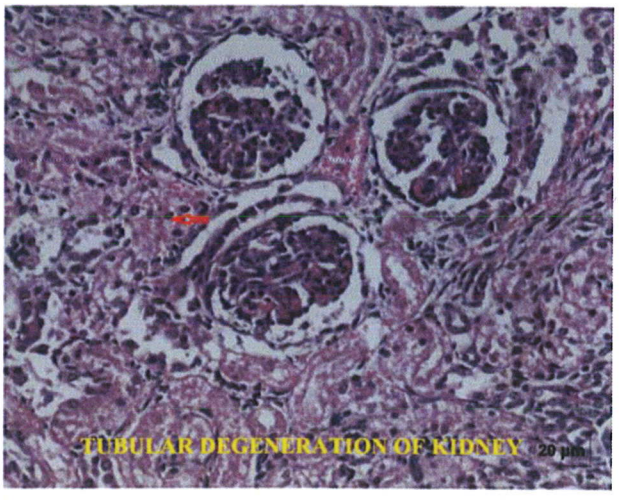

Fig 2. Tubular degeneration of kidney

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