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Successful management of fetal hydrocephalus-induced dystocia in a non-descript doe

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Abstract

A non-descript doe in its second parity was presented with dystocia following prolonged straining and rupture of the water bag. Vaginal examination revealed an anterior-longitudinal presentation with an abnormally large fetal head and absent fetal reflexes, suggestive of fetal hydrocephalus. Under epidural anaesthesia, the dead foetus was delivered per-vaginally using an obstetrical hook with mild traction. Radiography and CT confirmed cranial fluid accumulation, calvarial thinning and skull defects. Post-operative supportive therapy, including fluids, antibiotics and ecbolics, led to uneventful recovery. This case illustrates that careful assessment of fetal presentation can allow even hydrocephalus-induced dystocia to be relieved through minimally invasive per-vaginal delivery.

Keywords: Dystocia, fetal hydrocephalus, goat, per-vaginal delivery

1. Introduction

Dropsical conditions of the foetus such as ascites, hydrothorax, anasarca and hydrocephalus can be fetal cause of dystocia (Purohit *et al.*, 2012) ^[1]. Hydrocephalus refers to the buildup of excess fluid within the ventricular system or subarachnoid space due to exceeding production of cerebrospinal fluid, which typically leads to marked enlargement of the cranium. (Selvaraju *et al.*, 2020) ^[2]. Pathologically, hydrocephalus is categorized into two distinct presentations: external hydrocephalus is characterized by fluid retention in the subarachnoid space surrounding the brain parenchyma, whereas internal hydrocephalus involves the accumulation of cerebrospinal fluid within the cerebral ventricles (Prakash *et al.*, 2016) ^[3]. Hydrocephalus is documented most often in cattle, whereas it occurs relatively rarely in goats (Sharma *et al.*, 2017) ^[4]. Hydrocephalus can stem from autosomal recessive inheritance or develop due to vitamin A deficiency (Natkar *et al.*, 2024) ^[5] or may be due to infectious agents, nutritional factors or traumatic injury (Saini *et al.*, 2019) ^[6]. This present case shed light on the successful management dystocia induced by fetal hydrocephalus in a non-descript doe.

2. Materials and Methods

A non descript doe in its second parity was presented in full-term pregnancy with a history of straining for the last 24 hours and rupture of the water bag 20 hours prior to presentation with difficulty in parturition. General clinical examination revealed that the animal's physiological parameters were within normal range. Vaginal examination revealed the presence of a fully dilated cervix with the foetus present in anterior-longitudinal presentation (P1), dorso sacral position (P2) and head resting on the forelimb towards the birth canal (P3). Palpation of the foetus showed that the fetal head was abnormally large with fluid accumulation and no evidence of fetal reflex. Therefore, based on the history and clinical examination, the case was diagnosed as dystocia due to fetal hydrocephalus.

3. Results and Discussion

The animal was restrained in lateral recumbency and the perineal region was cleansed thoroughly using 1% potassium permanganate solution. 1 ml of 2% lignocaine hydrochloride

solution infused into the lumbo-sacral epidural space as a measure of obstetrical anaesthesia. Following infiltration of lubricants into the birth canal, an obstetrical hook fixed on the medial canthus of the eye and a dead female hydrocephalic foetus was relieved. With mild traction, fetal membrane could also be easily removed. After delivery of the foetus, two intrauterine bolus containing oxytetracycline, Urea, povidone iodine, citrus bioflavonoids, vitamin E and metronidazole were kept in the uterine cavity of the doe. Along with that, doe received Inj. Ringer's Lactate @ 250 ml i/v, Inj. Dextrose 25% @ 100 ml i/v, Inj. Chlorpheniramine maleate @ 0.5mg/kg bwt. i/m, Inj. Oxytocin @ 10 IU i/m, Inj. Meloxicam @ 0.2mg/kg bwt. i/m, and Inj. Enrofloxacin @ 5mg/kg bwt. i/m for three days. Oral ecbolics were advised to enhance progressive involution of the uterus.

Gross examination of the foetus revealed presence of an enlarged head with a depression in the top of the skull. Upon radiography, the foetus showed accumulation of fluid in the cranial cavity. Computed tomography scan showed thinning of calvarial bone, along with skull defect/fracture in the parietal, temporal, frontal and occipital bones.

Anterior presentation favoured the diagnosis of hydrocephalus condition (Sasi *et al.*, 2020) ^[7]. In mild cases of hydrocephalus, simple traction was sufficient to deliver the foetus (Selvaraju *et al.*, 2020) ^[2]. However, management of severe condition required more complex procedural interventions such as forced extraction, decapitation of the foetus (Ravikumar *et al.*, 2013) ^[8] or cesarean section (Selvaraju *et al.*, 2020) ^[9]. In this case, since the foetus was in anterior-longitudinal presentation and extent of hydrocephalus was mild, the foetus could be relieved with mild traction.

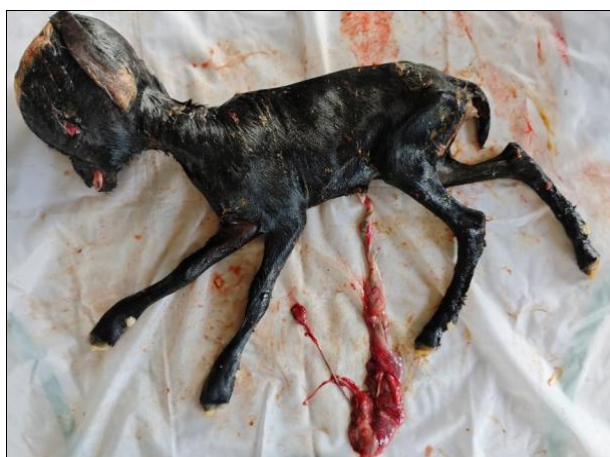


Fig 1: Foetus with hydrocephalic head (Lateral view)



Fig 2: Foetus with hydrocephalic head (Frontal view)



Fig 3: Radiograph of the foetus

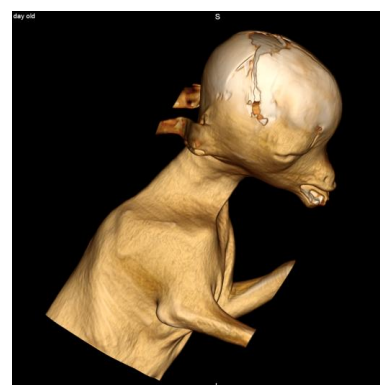


Fig 4: CT image of the foetus (view 1)



Fig 5: CT image of the foetus (view 2)

7. Conclusion

Mild hydrocephalus along with a favourable anterior-longitudinal presentation results into per-vaginal delivery of the foetus using an obstetrical hook and gentle traction. The doe recovered well with routine post-operative care. Overall, this case shows that a careful, presentation-based assessment can guide clinicians toward the simplest effective approach when managing hydrocephalus-induced dystocia.

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Conflict of Interest

Not available

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Not available

References

1. Purohit GN, Kumar P, Solanki K, Shekher C, Yadav SP. Perspectives of fetal dystocia in cattle and buffalo. *Veterinary Science Development*. 2012;2(1):e8-e8.
2. Selvaraju M, Prakash S, Varudharajan V, Ravikumar K, Palanisamy M, Gopikrishnan D, *et al.* Obstetrical disorders in farm animals: A review. *The Pharma Innovation Journal*. 2020;SP-9(9):65-74.
3. Prakash S, Selvaraju M, Ravikumar K, Palanisamy M. Obstetrical management of fetal hydrocephalus in a Kangeyam cow. *Indian Veterinary Journal*. 2016;93(9):85-86.
4. Sharma A, Sharma A, Singh M, Kumar P. Rare case of a hydrocephalus kid in a Gaddi goat. *Haryana Veterinarian*. 2017;56(2):238-239.
5. Natkar S, Patil AD, Koli A, Ramteke S, Surywanshi R. Dystocia due to foetal hydrocephalus and ascites in an Osmanabadi goat. *The Indian Journal of Animal Reproduction*. 2024;45(1):100-102.
6. Saini R, Sharma SK, Aziz PR, Mir LA, Pooniya R. Congenital hydrocephalus in a calf and its surgical treatment: A case report. *Indian Journal of Veterinary Sciences and Biotechnology*. 2019;15(1):81-82.
7. Sasi G, Kumar P, Kumar T, Bhalothia SK. Obstetrical management of hydrocephalic fetal monster in a Tharparkar. *Indian Journal of Veterinary Sciences and Biotechnology*. 2020;15:84-85.
8. Ravikumar K, Kumarasen A, Selvaraju M, Sivaraman S. Dystocia due to fetal hydrocephalus in a Jersey crossbred heifer: A case report. *Shanlax International Journal of Veterinary Sciences*. 2013;1(2):46-47.
9. Selvaraju M, Parthasarathy N, Varudharajan V, Prakash S, Ravikumar K. Dystocia due to live hydrocephalic foetus in a Jersey crossbred cow. *International Journal of Current Microbiology and Applied Sciences*. 2020;9(6):1029-1032.

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