

DYSTOCIA DUE TO HYDROCEPHALIC FETUS AND TRAUMATIC RUPTURE OF VAGINA AND UTERUS IN A COW

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SUMMARY

The present case study reports surgical delivery of hydrocephalic fetus in a non-descript cow suffering from dystocia due to traumatic rupture of uterus and vagina.

Keywords: Dystocia, Hydrocephalic, Surgical delivery

Dropsical conditions of fetus resulting in to dystocia include hydrocephalus, hydrothorax, ascites and anasarca (Hydrocephalus (Hydro: water, Cephalous: head). Dropsical condition with accumulation of excessive fluid in duramater or ventricles of brain (Purohit *et al.*, 2012) or subarachnoid space characterized by marked enlargement of cranium and this may be due to obstruction in free passage of cerebrospinal fluid into the arachnoid space leading to excessive swelling of cranial cavity during foetal development (Noakes *et al.*, 2009).

A cow of approximately 4.5 years of age with body weight about 250 kg was presented to veterinary clinics of the university with the history of failure of parturition. History also revealed that there was a fight between two cows last night. Fighting followed red colored discharge from vulva and animal stopped urination. Feed and water intake were reduced. Animal started straining but failed to deliver the fetus. The case was attended by local veterinarian and fetal mutation was attempted with failure to deliver the fetus.

Part of intestine was hanging out from vulva of cow. Pervaginal examination revealed tearing of lateral wall of vagina resulting into prolapse of intestine outside vulva. Uterus was also found ruptured and fetus was directly palpated through teared vagina and vulva. Cervix was 3 fingers open and hard. Fetus was in normal presentation with large size head (Fig. 1). On careful per-vaginal examination, it was diagnosed a case of dystocia due to traumatic rupture of vagina and uterus. The animal was primarily treated for preventing secondary infection (Inj. Ceftriaxone and Tazobactum 3.375 mg I/M), for pain management NSAID (Inj. Tolfenamic acid 10 ml I/M) and to maintain required fluid balance (Inj. NS. 3 liter I/V, Inj. D.N.S. 2 liter I/V and Inj. R.L. 1 liter I/V). Caesarean section through left paralumbar site in recumbency was

performed and dead fetus was removed. Tear in genital organs (uterus and vagina) were sutured using appropriate suturing technique. A course of fluid therapy (Inj. NS. 3 liter I/V, Inj. D.N.S. 2 liter I/V and Inj. R.L. 1 liter I/V), antimicrobials (Inj. Ceftriaxone and Tazobactum 3.375 mg I/M), antihistamine (Inj. Chlorpheniramine 10 ml I/M, Inj. Tribivet 10 I/V) were repeated for 7 days. Gradually animal started feeding and watering normally and recovered uneventfully.

Calves with hydrocephalus usually die because of the pressure on the vital centers of brain (Purohit *et al.*, 2012). Causative factors for the hydrocephalus may be genetic, nutritional, infectious or environmental (Szabo, 1989). An autosomal recessive gene is considered to be responsible for hereditary cases in cattle (Roberts, 1986) but intra-uterine infections and nutritional factors have not been fully evaluated except relationship of blue tongue virus to hydrocephalus condition (Upasana *et al.*, 2012). Hydrocephalus may occur alone or associated with other disorders such as brachygnathism, prognathism, retinal atrophy, hydramnios or ankylosis of limb joints. Severe form of hydrocephalus result in dystocia and that cannot be relieved by mutation and forced traction and there is a need to reduce head size by incising soft portion of hydrocephalic head (Fig. 2 & 3). In certain hydrocephalic cases having ankylosis of limb joints, caesarean section may be performed to deliver fetus.

Congenital hydrocephalus has been described in various animal species including cattle (Mouli, 1987; Balasubramanian *et al.*, 1997), buffalo (Pandey *et al.*, 2011), mare (Sharma, 1996) and camel (Abubakr *et al.*, 1998). Dystocia due to hydrocephalus is commonly seen in pig, puppies and cattle (Purohit *et al.*, 2012) and rare in mare (Singh *et al.*, 2013). It is common in cattle (Jana and Ghosh, 2005; Purohit *et al.*, 2012). Per-vaginal delivery was achieved successfully after puncturing the fetal head

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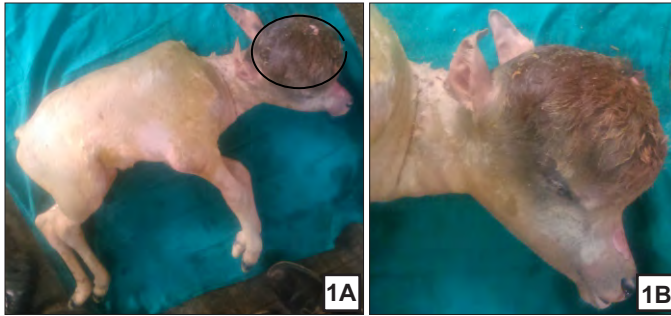


Fig. 1. Dead male calf having hydrocephalic head



Fig. 2. Dorsal view of bisected head showing fluid filled cranial cavity



Fig.3. Puncture of fluid filled membrane showing liquefied brain tissue with straw clear fluid

with trocar and cannula (Tripathi *et al.*, 2014). Diagnosis of the condition is easy if the fetus is in anterior presentation.

REFERENCES

- Abubakr, M.I., Ahmed, A.A., Nayel, N.M. and Fadlalla, M.E. (1998). Hydrocephalus in a new born male camel calf. *J. Camel Pract. Res.* **5**(2): 309.
- Balasubramanian, S., Ashokan, S.A., Seshagiri, V.N. and Pattabisaman, S.R. (1997). Congenital internal hydrocephalus in a calf. *Indian Vet. J.* **74**(5): 446-447.
- Jana, D. and Ghosh, M. (2005). Hydrocephalus in a calf. A case report. *The North East Veterinarian.* **14**(4): 11.
- Mouli, S.P. (1987). Surgical correction of congenital external hydrocephalus in an Ongole bull calf. *Indian Vet. J.* **64**(8): 696-698.
- Noakes, D.E., Parkinson, T.J. and England, G.C. (2009). *Arthur's Veterinary Reproduction and Obstetrics.* Elsevier Health Sciences.
- Pandey, A.K., Singh, G., Dutt, R., Sunder, S., Kumar, S. and Kumar, R. (2011). Per-vaginal delivery of an external hydrocephalic calf in a buffalo- A case report. *Indian J. Anim. Reprod.* **32**(2): 81-82.
- Purohit G.N., Kumar, P., Solanki, K., Shekhar, C. and Yadav, S.P. (2012). Perspectives of fetal dystocia in cattle and buffalo. *Vet. Sci. Dev.* **2**: 8.
- Roberts, S.J. (1986). *Diagnosis and treatment of Dystocia, veterinary obstetrics and genital diseases.* Indian Edition, CBS Publishers New Delhi. p. 283.
- Sharma, A. (1996). Dystocia due to hydrocephalic fetus with downward deviation of head in mare. *Indian Vet. J.* **73**(3): 337-38.
- Singh, G., Pandey, A.K. and Bugalia, N.S. (2013). Dystocia due to hydrocephalic foal in a mare-a case report. *Vet. Pract.* **14**(2).
- Szabo, K.T. (1989). *Congenital malformations in laboratory and farm animals.* Academic Press, Inc. San Diego, California.
- Tripathi, A., Mehta, J.S., Purohit, G.N., Sharma, S., Saini, K. and Pathak, S.K. (2014). Dystocia in a cow due to hydrocephalic fetus: a case report. *J. Livest. Sci.* **5**: 79-82.
- Upasana, R., Bhat, G.R., Varughese, E.E., Ghuman, S.P.S. and Honparkhe, M. (2012). Per-vaginal delivery of a Murrah buffalo calf with congenital high-grade hydrocephalus internus. *Vet. Pract.* **13**(2): 310-313.