

Congenital Occipital Meningocele in a New Born Female Jersey Calf and its Surgical Management

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1. ABSTRACT

A 2 day old female cross bred jersey calf with the history of reddish swelling over the head was presented at Frozen Semen Centre, Khanan, Kangan Ganderbal, Jammu and Kashmir, India. Clinical examination revealed it to be a case of congenital occipital meningocele. Surgical correction was performed under general anaesthesia and the animal recovered uneventfully.

2. INTRODUCTION

Cranial meningocele a congenital anomaly where fluid filled meninges protrude through a defect in the cranium has been reported to occur most commonly in cattle. [1-3] The defects occur due to improper ossification of the cranial bones and have been reported mostly on frontal and occipital regions. [4] The present communication reports the occurrence and surgical management of an occipital cranial meningocele in a calf.

Case history and examination

A two day old female crossbred jersey calf with reddish swelling since birth over occipital region of cranium was presented at Frozen Semen Centre, Khanan, Kangan Ganderbal, Jammu and Kashmir, India (Figure 1). Physical examination revealed fluid filled turgid sac without any hair coat over the occipital region. Based on the history and physical examination the swelling was diagnosed as occipital meningocele and it was decided to go for surgical correction.



Figure 1: Reddish swelling over occipital region (a&b).

Treatment and discussion

Before the actual surgical procedure the calf was administered 20 % Mannitol solution (30 ml, intravenously) so as to reduce the intracranial pressure. Four (4) hours after mannitol administration the calf was controlled in sternal recumbency and general anaesthesia was achieved by using Diazepam (0.5 mg/kg, intravenously) and Ketamine (3 mg/kg, intravenously). The region was prepared for aseptic surgery (Figure 2) and an elliptical incision was made at the base of the sac. The adhesions between the meninges and the raw skin were broken. The extra raw skin without hair coat was excised. The extra fluid filled meningeal membranes protruding out from the cranium through the opening were ligated close to the defect and then resected (Figure 3). Extreme care was taken to avoid the excessive bleeding and seepage of fluids into the cranial cavity. The edges of the skin without hair coat were sutured using Vicryl no. 2-0. The surrounding skin was mobilized by undermining and the edges were closed over the defect as per standard procedures using silk (Figure 4). Animal showed uneventful recovery immediately after surgery and got up normally without showing any nervous signs. Postoperatively, ceftriaxone for 5 days (5mg/kg b.wt) and meloxicam (0.2 mg/kg b.wt) for 3 days were administered intramuscularly. Local antiseptic dressing of the surgical wound was advised with povidone iodine solution.



Figure 2: Defect visible after excision of meninges.



Figure 3: Sutured skin over the defect.



Figure 4: Normal standing posture of calf immediately after surgery.

REFERENCES

1. Ayhan A, Duygu Y, Ahmet CD. Congenital giant occipital meningoencephalocele in a holstein calf fetus. Kafkas Universitesi Veteriner Fakultesi Dergisi. 2013;19:1065-9.
2. Krishna, Palli. Surgical management of congenital meningo encephalocele in a new born jersey calf: A case report. J Adv Vet Anim Res. 2016;3(2):192-4.
3. Leipold HW, Davis SM. Congenital defects in cattle and sheep. In: Current Veterinary Therapy, Vol 3, Food Animal Practice. Howard JL (Edn.), Philadelphia, WB Saunders. 1983;89.
4. Oliver JE, Hoerlein BF, Mayhew IG. Veterinary neurology. WB Saunders, Philadelphia. 1987.