

Meningocele in lambs—report of two cases

T. A. Abid¹, A. Hassanein², M. S. Al-Badrany³ and A. P. Singh⁴

University of Mosul,
Mosul (Iraq)

A 6 days old male lamb of Awasi breed was brought to College Clinics with a large swelling in the cranial region since birth. Examination of the abnormal swelling revealed to be a liquid filled sac of uniformly fluctuating consistency attached to occipital region. Aspiration of swelling yielded clear watery fluid. The lamb was having difficulty in supporting the head. The animal showed no neurological sign and its eye's reflexes were normal.

An another case of three days old male lamb of Awasi breed was also presented to College Clinics with a big swelling in the mid-cervical region since birth (Fig. 1). The swelling was having uniformly fluctuating consistency and was located on the dorsal surface of cervical vertebrae. Its aspiration also yielded clear fluid and no structural abnormality was detected in the eyes and eye reflexes were normal.

Both the cases were diagnosed as meningocele and surgery was considered

^{1,3}Demonstrator

⁴Asstt. Professor, Deptt. of Medicine, Surgery obstetrics, College of Veterinary Medicine.



Fig. 1. Vertebral meningocele in a lamb.

mandatory to resect the abnormal swelling.

The area including the swelling was prepared for aseptic surgery. The lamb was controlled in lateral recumbency and surgery was performed under local infiltration anesthesia using lignocaine hydrochloride (2%). A circular incision was made at the base of the swelling close to its attachment and whole mass was carefully removed by blunt dissection after placing the intestinal clamps. The muscle and subcutaneous tissues were then approximated in a simple continuous pattern using chromic cat gut Size 0. The skin incision was closed with interrupted mattress suture using silk No 1. (Fig. 2).

The animals were given broad spectrum antibiotics for 5 days and skin sutures were swabbed with alcohol daily. The sutures were removed on 8th post-operative day in case 1; while owner of case 2 did not bring the lamb after 5 days of surgery.

Congenital abnormalities like Atresia ani alone or with rectovaginal fistula in lambs have been reported previously (Nigam *et al.*, 1984). However cases of meningocele are of rare occurrence. The condition is also known as a cephalocele, meningoencephalocele, or meningoencephalomyelocele depending on the location and protrusion of contents. When



Fig 2. Animal after surgery.

References

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meninges and fluid only protrude through a cranial defect, the condition is termed meningocele, but when protrusion occurs through the vertebral defect, then it may be termed as meningoencephalomyelocele. It is fairly common in ovine. (Saperstein *et al.* 1975).

It is reported that the morphogenesis of these defects is not simply a problem of defective ossification with secondary protrusion of meninges, but instead, depends on a primary defect of neural tube leading to a focal failure of development of the skeletal encasement (Jubb and Kennedy, 1970). The meningocele is reported to vary in size from that of a pea to several inches in diameter, but they are always related to suture line. The condition occurs usually in frontal regions but some times it is midfrontal, (Jubb and Kennedy, 1970; Leipold *et al.*, 1983). In present case, the meningocele was occipital in one case and vertebral in the other. These congenital defects are reported to be associated with other defect, like arthrogryposis, kyphoscoliosis or atresia ani, but in present cases it was not associated with any other abnormality.

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