

FETOTOMY USING SURGICAL BLADE FOR RELIEVING DYSTOCIA DUE TO FETAL ARTHROGRYPOSIS IN EWE

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ABSTRACT

A full term ewe was presented with fetus in anterior longitudinal presentation, dorso-sacral position, right unilateral shoulder flexion and absence of fetal reflex. The amputation of head, and ankylosed fore and hindlimbs was carried out using scalpel and blade for per-vaginal delivery.

Key words: Dystocia, Fetal arthrogyrosis, Fetotomy, Sheep

INTRODUCTION

Arthrogyrosis is a congenital skeletal malformation that occurs during early stage of gestation and refers to fixed flexion of one or more joints. The characteristic of this malformation includes stiffness or limited movements of multiple joints, change of posture and limb function due to permanent contracture of joints and wasting of muscles (Khodakaram *et al.*, 2014). The present report describes a case of fetal arthrogyrosis in a Ramnad white Ewe and successful per vaginal delivery of fetus through fetotomy.

CASE HISTORY AND OBSERVATIONS

A pluriparous four and half year old full term pregnant Ramnad white ewe was presented with the history of rupture of water bag and straining without progress in fetal expulsion for >2h. General clinical examination revealed that animal was dull with congested conjunctival mucous membrane and normal rectal temperature (102°F). Vulval lips were edematous and vaginal examination revealed dilated cervix with fetal head and a forelimb in the vaginal passage. The fetus was in anterior longitudinal presentation with dorso-sacral position and right unilateral shoulder flexion with absence of fetal reflex.

TREATMENT AND DISCUSSION

Treatment was initiated with intravenous fluids (200 ml, 5% dextrose normal saline) and pheneramine maleate (1.5 ml, i.m.) to stabilize the animal. After thorough lubrication of vaginal passage using liquid paraffin, the correction of postural abnormality was attempted by mutation and the attempt was failed due to rigidity in the limbs. Since the fetal reflex was absent, the head was decapitated using scalpel by transverse incision on skin at atlanto-occipital joint. With the additional space, the correction of flexed limb was tried, but it was impossible due to extreme rigidity of joints. Hence, both the forelimbs were amputated using standard fetotomy procedure (Roberts, 1971). Briefly, the Krey schottler hook was applied on neck region and extended in vaginal passage with everted vulval lips. An incision was made on the skin followed by articulation of elbow joint using Board parker blade with handle and the limb was removed.

However, the space created in birth passage was not sufficient to deliver the fetus by traction. Following traction on remaining fetus, the ankylosed hind limbs hindered the fetal delivery. Hence, the amputation of hind limb at stifle joint was performed and the fetus was tracked out per vaginum. Further examination revealed absence of additional fetus and minor lacerations in the vaginal passage and uterus. The dam was treated with antibiotics,

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Figure: Fetal Arthrogryposis in a sheep

anti-inflammatory and intrauterine bolus for 4 days leading to an uneventful recovery.

Gross examination revealed ankylosed fore and hindlimbs of the fetus (Figure) and the case was diagnosed as fetal arthrogryposis (Hall, 2013). Arthrogryposis is described as congenital skeletal joint involvement, non-progressive malformation from birth that usually affects several limbs alone or with others. Arthrogryposis is mostly combined with other deformations like palatoschisis, scoliosis, lordosis, kyphosis and torticollis (Kacar *et al.*, 2008). In the present report, the deformation or skeletal malformation was limited to the fetlock joints in forelimbs and hock joint in hind limbs as reported earlier (Anusha *et al.*, 2015). Arthrogryposis might be due to simple recessive genes which results in expulsion of dead fetus with flexed limbs and wry neck in sheep and goats (Roberts, 1971). Ingestion of teratogens like toxic plants, toxic chemicals and selenium or in combination with manganese deficiency might also lead to fetal arthrogryposis (Nawrot *et al.*, 1980).

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