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Dystocia due to foetal anasarca in goat: A case report

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Abstract

Fetal anasarca is a condition characterized by wide-spread swelling of the skin due to subcutaneous and inter-muscular accumulation of serous fluid resulted into generalized edematous condition of whole body. In goat dystocia occurs most commonly due to faulty presentation, position and posture of fetus, along with anomalies and monsters of fetus. Present case describes the dystocia in goat because of fetal anasarca along with posterior longitudinal presentation, lumbo-sacral position with both damaged hind limb in birth canal and reports the successful management of dystocia through caesarean section with four days post operative care and management.

Keywords: dystocia, fetal anasarca, monsters, anomalies, caesarean section

Introduction

Fetal anasarca or excessive edema of fetus is seen most commonly in animals like cattle, sheep and goat. It may develop in a single or one of twins (Roberts, 1982) [6]. Anasarca is generalized edematous condition of body less commonly reported in small ruminants (Prabharan *et al.*, 2016) [4]. Foetal anasarca has been observed mainly in calf, but occasionally in kids and foals (Craig, 2000) [12]. The affected fetus is usually carried to term, and concern is caused by the lack of progress in second-stage labor. This is due to the great increase in fetal volume caused by the excess of fluid in the subcutaneous tissues, particularly of the head and hind limb. Fetal monsters arise from adverse factors affecting the fetus in the early stages of its development. These factors may be of physical, chemical, viral and mostly of genetic origin. A fetal monster usually has severe physical damage that affects its appearance. The various types of monsters and congenital abnormalities in farm animals reported in literature Ex. Schistosomus reflexus, perosomus elumbis, hydrocephalus, fetal anasarca, fetal ascites and chodroplastic monsters (Arthur *et al.*, 1996) [1]. The present case detailed about successful retrieval of anasarca fetus through caesarean section in goat.

Case History and Clinical Observations

A three year old goat was presented to Teaching Veterinary Clinical Complex (TVCC), Sikar with history of full term gestation, presented in lateral recumbency, anorexic since two days and on its second parity. Mucous membrane of dam's eyes was pale and there was complete cessation of abdominal straining. Further history revealed that the parturition started 12 hrs. earlier with the rupture of water bag and the case of dystocia was handled by owner itself at home. Per vaginal examination revealed that fetus in posterior longitudinal presentation and lumbo-sacral position with both hind limbs already damaged by local non technical person. The fetus was oversized and indistinct shape with presence of tail in birth canal with distended abdomen. Further, traction was applied but failed to remove the fetus through per vaginal route, therefore; it was decided to perform caesarean operation.

Treatment and Discussion

Goat was restrained in right lateral recumbency and site of incision was prepared. To avoid hypovolumic shock, intravenous fluid infusion (Dextrose 5%, Normal Saline), antibiotic (strepto-penicilline), dexamethasone and NSAID (melonex) was given parentally before making ventro-oblique incision on lower left lateral abdominal skin. Following the incision of skin the fascia, abdominal muscles, peritoneum and then uterus was incised on its greater

curvature to expose the fetus. The two dead fetuses were removed. On gross examination there was generalized edema of one fetus where as another dead fetus was of normal in size. The uterus was lavaged with povidone-iodine solution and warm normal saline to remove blood clots and other placental debris. Cleanex as intrauterine bolus and oxytocin @ 10 IU intramuscularly was given. The uterus was sutured with a continuous inverting pattern (cushing suture) without full penetration of the muscle layers, using vicryl no.1 followed by lambert suture pattern. The peritoneum and the abdominal muscles were opposed using catgut no.1 in a lockstitch suture pattern followed by sub-cuticular suturing using catgut in simple continuous pattern. The skin was opposed in interrupted horizontal mattress fashion using mersilk no.1. Dressing of suture line was done with betadine ointment. Antibiotic and anti inflammatory were continued for four days leading to successful recovery.



Fig 1: Anasarca fetus of Goat

Dystocia in farm animals is the one of the major factor that results in to economic loss due to loss of dam and fetuses (Brounts *et al.*, 2004) ^[11]. Anasarca condition is seen commonly in cattle but may affect sheep, (Roberts, 1982) ^[6], goat (Tamuli *et al.*, 1987; Purohit *et al.*, 2006) ^[7, 5] and also rarely reported in the buffalo (Devanathan *et al.*, 1990) ^[2]. Roberts (2004) ^[9] reported that fetal anasarca may develop in a single fetus or one of the twins and associated with achondroplasia or bull dog calves and was due to simple autosomal recessive gene. Abortions of affected fetuses are common between 4 to 8 months of gestation in cattle. Most anasarca fetuses are expelled dead. A fetus with anasarca may be prone to dystocia because the generalized edema will cause the fetus not to pass through the pelvic canal (Noakes *et al.*, 2001) ^[10]. When the fetus poses difficulty in its delivery, cuts must be given over many places to release the fluid or fetotomy and/or forced extraction may be used to deliver the fetus. Surgical intervention is usually required for the delivery of oversized anasarca fetus (Kumar *et al.*, 2005) ^[3]. In present case also the dead fetus was edematous with large head and small limbs and gross examination revealed the cases of fetal anasarca (Fig 1) delivered after cesarean section. The antenatal diagnosis of most of the commonly occurring fetal complications of gestation is partly possible with

ultrasonographic examination and such pregnancies should be carefully monitored or terminated (Laiju *et al.*, 2012) ^[8]. Usually the pregnancy is maintained full term in case of fetal anasarca alone. In the present case, the presence of normal fetus along with anasarca fetus would have helped in securing the pregnancy.

Conclusion

Anasarca in developing fetus may be occurred due to a lot of causes e.g. physical, chemical, viral and mostly of genetic origin Such fetuses may cause dystocia at the time of parturition specially when associated with abnormal presentation, position and posture. To manage such cases of dystocia, caesarean section or fetotomy can be performed in order to save the life of dam.

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