



Management of foetal mal-posture-induced dystocia in a 3-year-old Red Sokoto doe

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Abstract

An adult Red Sokoto doe weighing 35kg was presented to the large animal clinic unit of the State Veterinary Clinic, Sokoto, with the complaint of straining and difficulty in giving birth, observed about 12 hours prior to presentation. History revealed that, the doe was housed with 3 other goats, where wheat bran, bean husk and hay were provided as feed and given water *ad lib*. There was no history of medication and vaccination. On physical examination of the doe, there was evidence of straining and foul-smelling discharge from the vulva. Vaginal examination revealed an open cervix with a dead kid in anterior presentation and a flexed right forelimb at the carpal joint. The dead kid was delivered via the repulsion and traction method. Treatment administered was Vetcotrim® bolus containing Sulphadiazine 200mg/kg and trimethoprim 40mg, which was inserted into the uterus through the cervix, Maxymycin Q® (inj.) 5% at 0.4ml/kg intramuscularly, Multivitamin at 1ml/10kg intramuscularly and Philodic® (inj.) given intramuscularly at 75mg/3ml. The animal recovered completely after 7 days.

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Introduction

Dystocia refers to the condition in which an animal fails to or has difficulty expelling the foetus at the time of parturition, and human intervention becomes a necessity (Blood *et al.*, 2011). It usually occurs when the first or second stages of parturition are delayed or when the first stage fails to progress to the next stage within 30 minutes (Purohit, 2006).

Generally, dystocia may be of foetal or maternal cause in origin (Noakes *et al.*, 2009). Foetal cause of dystocia occurs mainly due to foetal oversize, kid mal-presentation, mal-position, postural defects and congenital abnormalities (Pugh & Baird, 2012). Maternal cause of dystocia is mainly due to a deficiency in dilatation of the cervical canal (ring womb), narrow pelvis and uterine inertia in

polytocous animals (Pugh & Baird, 2012). Close observation of an animal during parturition is essential for timely intervention.

In Sokoto, Nigeria, Ahmed *et al.* (2017) reported that more cases of dystocia occurred in the West African dwarf breed (40.62%) than in the Sahelian (28.13%) and Red Sokoto goat breeds (31.25%). This may be attributed to the relatively small-sized body of the West African dwarf goats, high frequency of twinning, triplets and large-sized kids (Neils *et al.*, 2009).

Dystocia is a major cause of death in goats, leading to loss of kids and maternal mortality, leading to economic losses to the goat farmers. The prolonged duration of labour inflicts traumatic injuries, systemic infections and decreases the fertility potential of the animal (Noakes *et al.*, 2009). However, the successful management of dystocia depends on the correct diagnosis of its cause and prompt management. This present paper describes the management of dystocia caused by foetal mal-posture in a Red Sokoto Doe.

Case Presentation

Case history

A 3-year-old Red Sokoto Doe weighing 35kg was presented along with a live apparently healthy neonate to the Large Animal Clinic unit of the State Veterinary Clinic, Sokoto, with a complaint of straining, which was noticed 12 hours prior to presentation. The doe kidded one kid successfully at home, but another one was seen hanging from the vulva. It was revealed that an unskilled attempt had been made to extract the foetus at home, resulting in traumatic amputation of the left forelimb prior to

presentation at the Veterinary clinic. History further revealed that the doe was fed on wheat bran, bean husk and hay, and was managed semi-intensively with 3 other goats (2 females, 1 male). There was no history of medication or vaccination.

Clinical examination

On physical examination, all the vital signs were within the normal range. The abdomen was distended with evidence of straining. The external genitalia were cleaned using warm water and a sterile gauze bandage. Lubrication of the gloved hand was done with paraffin oil, and a careful per-vaginal examination was carried out. The cervix was fully dilated, a foul-smelling discharge was perceived coming out from the vulva, a foetal limb was found hanging on the vulva, straining and the absence of foetal reflexes indicated that the foetus was dead. The foetus was observed to be in anterior longitudinal presentation, dorso-sacral position with incomplete extension of the right fore limb and absence of the left forelimb as shown in Plate I. Thus, dystocia due to foetal mal-posture was diagnosed.

Case management

The birth canal was lubricated using paraffin oil. Correction of the mal-postured dead foetus was performed using mutation. This involved pushing the foetus back into the uterine cavity (Plate II) by extending the right limb from the carpal bone to correct the postural defect of carpal joint flexor, grasping the right forelimb of the foetal body along with the head and dead foetus was then pulled out



Plate I: Patient and the kid on presentation to the clinic. Black and yellow arrow Showing the patient and normally delivered kid on presentation respectively

Plate II: The foetal limb hanging on vulva of a Red Sokoto doe

manually by applying gentle traction. After manual traction, a female kid (weighing 1.5kg) was removed dead with its left forelimb amputated (Plate III). Uterine lavage was conducted using normal saline, and an intrauterine bolus (Vetcotrim®) was administered. Additionally, 4ml Maxymycin Q® (5%) I.M × 3 days, 4ml Multivitamins I.M × 3 days and 3ml Philodic® I.M × 3 days were administered to prevent secondary bacterial infection, improve the patient's appetite and provide analgesia, respectively.

Discussion

The method that could be used for manual assistance of birthing in small ruminants largely depends on the cause of dystocia (Noakes *et al.*, 2009). In this case, the dystocia was caused by foetal mal-posture and death. The foetal death was likely due to prolonged maternal straining, which may have led to progressive foetal weakness and subsequent demise. The death of the foetus may have led to foetal inertia, leading to the inability of the dam to deliver on its own. The death of foetuses in anterior presentation accounts for more than 90% of births in small ruminants (Noakes *et al.*, 2001). Foetuses in this type of mal-posture find it difficult to extend their limbs during the second stage of labour (Adeyeye *et al.*, 2016).

Foetal mal-disposition is the most common cause of ovine and caprine dystocia. Mild to severe foetal illness and foetal death might predispose to foetal mal-disposition, as may maternal illness or abnormal hormone level (Noakes *et al.*, 2009).

Foetal mutation to correct mal-postures and proper traction were the safe techniques to relieve dystocia (Taha *et al.*, 2005). In goats with foetal mal-disposition, foetal mutations were carried out, and the foetuses were delivered per-vaginally. The survival rate of the dam was higher following per-vaginal foetal delivery thus, the effectiveness of the type of treatment for delivering the foetus in goat dystocia depends upon the type of dystocia and its cause. Pervaginal delivery can be attempted via repulsion, mutation and traction if the dam with dystocia is carrying a normal-size foetus and has complete cervical dilation and pelvic dimensions that permit hands to be introduced into the uterus for foetal manipulations (Ismail, 2017). In cases where more than one foetus is presented to the birth canal, then one of them should be removed first, followed by the other.

In conclusion, dystocia constitutes a major reproductive problem among small ruminants and can lower their productivity. A lot of kid wastage can



Plate III: A dead foetus from a Red Sokoto doe

result from such a condition, and this can have negative effects on the reproductive performance of their animals. The occurrence of dystocia can be prevented or treated quickly to save the lives of the dam and the foetus as well as to prevent economic losses. Timely correction of such emergencies can prevent complications and can further improve the chances of survival.

Conflict of Interest

The authors declare that there is no conflict of interest.

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