

## POST MORTEM CASE REPORT OF A KALAHARI RED DOE THAT DIED OF COMPLICATIONS OF MULTIFACTORIAL DYSTOCIA

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### ABSTRACT

A triparous Kalahari Red doe was presented for post-mortem with a sero-sanguinous vulvular discharge and abdominal distension. At necropsy, two foetuses, male and female, about 3.5 kg each were observed. The left lateral abdominal muscles of the doe presented with a tear that corresponded with another tear on the lateral aspect of the left horn of the uterus and showing a partial protrusion of the cranium of a male twin. The male twin was lodged in an incompletely dilated cervix in a caudal longitudinal presentation, dorso-sacral position, and bilateral hip flexion posture. The same twin also presented with a left lateral abdominal wall rupture and herniation of the urinary bladder and intestines. The female twin was in the right uterine horn in a cranial longitudinal presentation, dorso-sacral position, but with bilateral carpal flexure. In brief, the circulatory collapse due to a multifactorial dystocia was the final diagnosis.

**Keywords:** Doe, Dystocia, Kalahari Red, Post-mortem, Uterus

### INTRODUCTION

The Kalahari Red is a “minimum care / maximum profit” goat breed recognized as a landrace breed in 1998. Although these goats reproduce well, they are not spared of the scourge of dystocia. In both sheep and goats, the incidence of dystocia varies from 8 to 50% (Purohit, 2006). A proper diagnosis is usually hampered by the impossibility of performing rectal palpation in goats (Jayakumar *et al.*, 2013). The successful treatment of a dystocia depends on timeous arrival and correct diagnosis of the causes of the dystocia otherwise foetal or even doe death is inevitable (Hussain and Zaid, 2010). This paper describes the post mortem report of a doe that died of complications of multifactorial dystocia.

### CASE HISTORY AND OBSERVATIONS

A 4-year-old triparous Kalahari Red nanny goat

was presented for post mortem following death due to complications of dystocia. Case history revealed previous clinical signs/ anomalies except for prolonged straining and ensuing death overnight with no human intervention. The goat was in good body condition. There was a serosanguinous discharge from the vulva and moderate abdominal distension. Fetal membranes were slightly protruded through the vulva. Upon opening the abdomen, about 3 L of serosanguinous fluid was found inside the peritoneal cavity. All abdominal organs (except for the uterus) appeared normal. There was a 15 cm transverse tear in the aponeurosis of insertion of the transversus abdominis roughly 5 cm from the linea alba. The uterus was enlarged and moderately bloated. The goat was pregnant with a pair of full term dizygotic male and female twins with signs of anasarca. First twin (the first to engage the pelvic inlet) was male and located in the left uterine horn while second twin was female and in the right uterine horn. The left lateral uterine body had a 15 cm-long tear that involved all layers of the wall. First twin was in a longitudinal caudal presentation, dorso-sacral position with a bilateral hip flexion breech

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posture. The foetus was about 3.5 kg in weight and had a ruptured left abdominal wall with herniation of the bladder and intestines. There was also evidence of post mortem peeling off of the skin and the vertebral column was disarticulated of at the level of the lumbar spinal vertebrae L2 and L3. The second twin was in a cranial longitudinal presentation, dorso-sacral position with left-lateral extension of the neck and a bilateral carpal flexion posture. The left renal pelvis had petechial and ecchymotic haemorrhages.

### TREATMENT AND DISCUSSION

The post mortem examination revealed that the dystocia in this case could have been multifactorial. There was incomplete cervical dilation (ringwomb), foetal oversize, anasarca, twinning with breech presentation and bilateral hip flexion in the male fetus that have been reported by previous workers (Abdullah *et al.*, 2015; Bhattacharyya *et al.*, 2015). Anasarca (Jayachandra *et al.*, 2013) and uterine tear has only been rarely reported. Foetal rupture and fracture of the backbone has, to our knowledge, not been previously reported.

Usually dystocia occur with simultaneous presentation of twin foetuses. The twins in this current case, however, were not presented simultaneously. The twins were clearly oversized (about 3.5 kg) and this obviously significantly contributed to the dystocia. It was impossible to determine if the anasarca was present before the onset of labour or developed during labour or post-mortem. If it was present before commencement of contractions, it is likely to have contributed to diameter of the male foetus, hampering passage through the pelvis. Furthermore, the malposture of bilateral hip flexion (breech presentation) on its own was adequate to prevent the doe from progressing beyond second stage labour.

In present case, the doe was indisputably faced with multiple problems that included incomplete cervical dilatation, anasarca, foetal oversize, caudal

presentation with breech posture of the male twin that were observed at post mortem. As the doe failed to progress beyond the second stage of labour and the continuous straining led to fracture of the male twin's backbone, rupture of the left abdominal wall of the male twin, rupture of the left lateral wall of the doe's uterus, tear of the aponeurosis of the transversus abdominis muscle. The rupture of the abdominal muscles and the uterus led to uncontrolled bleeding and accumulation of a serosanguinous fluid (maternal blood, foetal blood and foetal fluids) that was present in the peritoneal cavity. The doe most likely died from circulatory collapse resulting from hypovolemic shock and possibly endotoxemia. In fact, the suggestion that labour contractions can create forces capable of causing fracture and or/disarticulation of the foetal backbone is puzzling and has not been reported in small ruminants. The novelty of this case report lies mainly in the tear of the doe's abdominal muscles, the rupture of the abdominal wall of the male twin with pathological herniation of the intestines through the tear and the accompanying fracture/dislocation of the vertebral column at L2 -3 level.

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