



Dystocia due to Dicephalic Foetus in an Ouda Yankasa Cross Ewe

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SUMMARY

A two-year-old Ouda Yankasa cross ewe was presented to the Veterinary Teaching Hospital, Usmanu Danfodiyo University, Sokoto with the complaint of difficulty in parturition. History revealed the ewe had been straining for 3 days prior to the presentation without successfully lambing. Physical examination revealed the ewe was weak, depressed, recumbent and intermittently straining with pale ocular mucus membrane. A limb was seen protruding from the vulva with lochial discharge. A dead foetus with two heads was delivered through caesarian section. Radiological examination revealed incomplete twinning from the atlas bone caudally. One hour after surgery, the dam also died. Post mortem examination revealed poor nutritional condition of the dam and its rumen impacted with 3.8 kg weight of polythene. Pinpoint haemorrhages on the uterine wall and uterine lumen lined with pus extending to the uterine horn were observed. This report shows that dicephalic foetus is detrimental to sustainable livestock production. In addition, the delay in seeking veterinary care caused the septicemia seen and led to the death of the dam and foetus.

Key words: Congenital, Lambing, Dystocia, Ewes, Pregnancy.

INTRODUCTION

Dicephalic foetus is a type of conjoined foetus which has two heads (Mehmood *et al.*, 2014). Conjoined foetuses are twins with incomplete duplication into two separate individuals (Shojaei *et al.*, 2006). Although the extent of separation vary from one report to the other, cranial duplication is more common than caudal duplication (Robert, 2004). The causes of congenital

abnormalities are multifactorial but drugs, infectious diseases, poisonous plants, mineral salts, Vitamins (A, D and E) deficiencies, hormonal factors and physical reasons or by their interactions have been incriminated in their aetiology (Kaçar *et al.*, 2008). However, genetic factors related to foetal environment has also been suggested (Leipold *et al.*, 1983). Congenital anomalies

cause high economic losses often due to foetal oversize associated with dystocia and foetal death while the prognosis is guarded for the dam (Robert, 2004). In most double headed foetuses, cesarean section is performed when the foetus is alive but fetotomy is usually performed when the foetus is dead.

In Nigeria, foetal congenital abnormalities have been reported in dogs (Nottidge *et al.*, 2007), goats (Sonfada *et al.*, 2010, Olopade *et al.*, 2010, Samuel *et al.*, 2015, Oviawe *et al.*, 2017), sheep (Sivachelvan and Mshelia, 2003; Samuel *et al.*, 2014, Samuel *et al.*, 2015, Baraya *et al.*, 2015), cattle (Ate *et al.*, 2011, Salami *et al.*, 2011) and camel (Garba, 1993). There is paucity of records on cases of dicephalic foetus in sheep. To the best of our knowledge, only one report of dicephalic foetus due to Omphalo-Ischiopagus was documented (Samuel *et al.*, 2014).

CASE HISTORY

A 2-year-old Ouda/Yankasa cross ewe weighing 24 kg was presented at the Large Animal Clinic of the Veterinary Teaching Hospital, Usmanu Danfodiyo University, Sokoto-Nigeria, with a complaint of difficulty in parturition, although it was a primipara. History revealed that the ewe has been straining for 3 days prior to presentation. The ewe was managed semi-intensively with one other ewe and fed on bean husk, hay and wheat bran.

CLINICAL EXAMINATION AND MANAGEMENT

On physical examination, the patient was weak, depressed, recumbent and straining intermittently. The ocular mucus membrane was pale and the foetal limb was seen protruding through the vulva with lochial vaginal discharge. Vaginal examination revealed abnormal posture and presentation with no reflex suggesting that the foetus was dead.

Attempts to deliver the foetus by manipulation and forced traction were unsuccessful. The dam was placed on 5% dextrose saline and cesarean section was performed as described by Vermunt (2008) using the left flank approach. Briefly, the area was shaved after which an inverted L-block anaesthesia was made by infiltrated the area with about 20 mls of 2% lignocaine. An incision of about 10 cm long was made into the skin from the lumbar region and extended through the abdominal muscle to the peritoneum. The uterus was then exteriorized and incised at an area of less vascularity to minimize haemorrhage. A dead dicephalic foetus was delivered and the hysterotomy incision was closed with lambert over sown with cushioning using chromic catgut size 0. The muscles and skin were closed using chromic catgut. A dorsoventral radiograph of the head and neck was taken. Unfortunately, the dam died one hour after surgery and was submitted for necropsy examination.

RESULTS AND DISCUSSION

Grossly, the foetus had a body with two heads. Each head had a mouth, nose, eye, two ears, (Figure 1). The neck, thorax, abdomen and limbs were single and grossly normal. On radiographic examination, the two heads were separated from the bifurcation at the atlas bone (Figure 2).

Post mortem examination of the dam revealed a poorly fleshed carcass and vulva stained with vaginal discharge. There were pinpoint haemorrhages on the wall of the uterus with a foul smelling pus, extending to the uterine horns. The rumen was impacted with 3.8 kg weight of polythene and indigestible materials.

Dystocia is difficult parturition. Conjoined foetus of any part of the body often leads to dystocia caused by foetal oversize. In this case, the client sort for intervention after three days following the onset of parturition, which may have contributed to the death of the foetus, although the foetus may not be compatible with life even after parturition



Figure 1: Diccephalic foetus of an Ouda Yankasa lamb. Note the two heads (arrows)

due to incomplete development. The cause of diccephalic foetus in this case was unknown, but incomplete twinning characterized by duplication of the mouth, nose, eye, ear, mandible and maxilla may be incriminated. In addition, congenital duplication has been attributed to factors that account for incomplete parting of the primitive streak after 13th day of fertilization and teratogens (McGirr *et al.*, 1987).

The dam was observed to be slightly emaciated at post mortem, probably due to poor nutrition and loss of appetite due to the rumen impaction. It is also possible that the increased demand for nutrition in the third trimester of pregnancy may be involved. Dams carrying very large foetus or twins require more nutrition during this period to meet up with the increasing demand for energy (Firat and Ozpinar, 2012). The haemorrhage on the wall of the uterus may have been caused by trauma during the 3-day straining and manipulations by the clinician to deliver the foetus of the dam. The foul smelling pus in the uterus was caused by prolonged opening of the cervix due to the protruding limb there by allowing bacterial invasion of the uterus and subsequently pyogenic bacterial proliferation leading to septicaemia and possibly death of the dam.

In conclusion, the dystocia was caused by the diccephalic foetus that died due to prolonged straining, exhaustion and

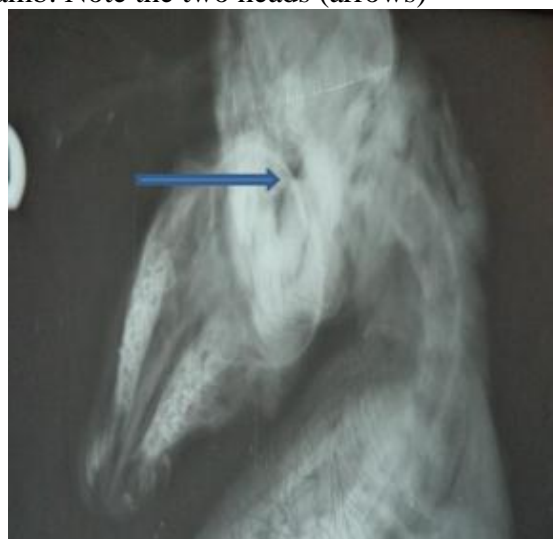


Figure 2: Dorsoventral radiograph of a diccephalic foetus showing the site of bifurcation at the atlas bone

subsequently septicaemia culminating to the death of the dam.

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