

MULTIPLE CONGENITAL SKELETAL MALFORMATIONS IN A LAMB ASSOCIATED WITH DYSTOCIA IN A YANKASA EWE

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SUMMARY

A ewe was relieved of dystocia by manual manipulation. The lamb was found to be malformed. There were multiple skeletal malformations which included brachygnathia, arthrogryposis and kyphoscoliosis. Other malformations included patella absence, resulting in bowing of both fore and hind limbs with poorly developed muscles associated with these skeletal structure. Dystocia was believed to be a result of fetal monstrosity resulting in abnormal posture. The cause of the congenital malformations was not obvious immediately. Further observations of the ewe in subsequent pregnancies are envisaged.

KEY WORDS: Multiple, Congenital, Skeletal, Malformations, Lamb, dystocia, Yankasa-ewe

INTRODUCTION

Congenital malformations contribute to economic losses in food animals by causing decreased calf and lamb crop yields, dystocia, early culling and increased medical bills (Gyang *et al.*, 1984). Even though elaborate data on the causes of these malformations exist in the developed countries, non exists in Nigeria. A few cases of congenital malformations in ruminants have been cited recently (Gyang *et al.*, 1984; Ibrahim *et al.*, 1984, 1987, 1990), and include amelia, scoliosis, umbilical hernia, cleft palate, atresia ani, acephalia, microcephaly, kyphoscoliosis, spinal bifida and incomplete twinning.

This report is an attempt to further document one of such malformations in a ewe associated with dystocia.

Clinical Case History

On the 18th January 1999, a 50kg Yankassa ewe was presented to the Ambulatory Unit of the Ahmadu Bello University Veterinary Teaching Hospital/Faculty of Veterinary Medicine, Zaria, with severe continuous straining and hanging afterbirth. The ewe had delivered successfully one viable female lamb during the early hours of the same day. History revealed that the ewe in a previous lambing, suffered a dystocia involving the second lamb in twin pregnancy. She was assisted by a

veterinarian to deliver a dead lamb that was apparently malformed. However, the nature of the deformity was not described.

Following a detailed physical examination, the vital parameters were 38.0°C, 78/minute and 17/minute for rectal temperature, heart and respiratory rates respectively. The ewe was alert and in excellent body condition. On vaginal examination, a live fetus in normal presentation and position but with a left lateral deviation of the head and neck was palpated. The forelimbs appeared crooked. A diagnosis of dystocia due to postural abnormality was then made. On manual manipulation and subsequent delivery of a female lamb, she was found to be weak grossly malformed and much smaller than the twin-mate which was normal. She died a few hours later. The carcass was sent to the Necropsy Unit, Department of Pathology, Faculty of Veterinary Medicine, Ahmadu Bello University, Zaria for a detailed postmortem examination by a qualified pathologist. The dam was treated with 20mg/kg body weight of oxytetracycline (Alamycin^(R) Long Acting) to contain any possible secondary bacterial infection sequel to the obstetrical manipulation.

Necropsy Findings

The necropsy results indicated the following multiple congenital skeletal malformations; brachygnathia (inferior), arthrogryposis, kyphoscoliosis, absence of patella, crooked fore and hind limbs, and poorly developed thigh and other muscles (Figure 1A and 1B).

DISCUSSION

The congenital malformations in the lamb were incompatible with life as she could not suckle nor stand. Several causes of congenital malformations have been reviewed by Roberts (1986) and include genetic and non-genetic environmental factors. These defects appear to be multiple in most cases affecting many organ structures thus suggesting a systemic cause possibly at the time of organogenesis at embryonic stage.

The case presented here also conformed to other cases previously reported and reviewed. The cause of congenital malformations in this case was however not obvious immediately. It was also difficult to understand why only one of the lambs was malformed. It is envisaged that the ewe will be further observed in her subsequent pregnancies with the view of identifying the possible aetiologic agent. The dystocia in the ewe was believed to be due to the malformations resulting in postural abnormality. It is concluded that congenital malformations are a significant cause of economic loss in livestock industry in Nigeria.

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FIGURE 1A: A, B = Crooked limbs; C = Brachygnathia; D, E = Other gross skeletal deformities along spinal column



FIGURE 1B: A = Deformity of elbow joint; B = crooked hind limbs; C = Brachygnathia