

ETIOLOGY AND CORRECTION OF INCOMPLETE CERVICAL DILATATION IN EWES IN THE NORTH EAST ZONE OF NIGERIA

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Existence of ringwomb (incomplete cervical dilatation) as a cause of dystocia in ewes has been reported (Edward and Jones, 1957) which was associated with calcium and magnesium imbalance. Stubbling (1971) recorded a significant lowering of serum calcium levels in ewes with incomplete cervical dilatation. Hypocalcaemia in does may cause non productive uterine contractions and failure of the cervix to dilate (Majeed and Taha, 1991).

Forty eight ewes of mixed breeds (Borno White, Balami and Huda) with apparent obstetrical problems contributed to this study between 1990 and 1994. Twenty seven ewes were presented with ringwomb and twenty one lambed normally and were used as control. Blood samples were collected before parturition and sera separated immediately for calcium and glucose analysis, according to procedures outlined in MAFF/ADAS reference book 390 (Anonymous, 1984). Manual dilatation of the cervical canal per vaginum and/or caesarian section was used to induce delivery of the lamb. Student's t test was applied to compare differences in serum calcium and glucose levels between two groups.

Out of 27 affected ewes, caesarian section (CS) was undertaken in 17 cases among which 14 survived showing a success rate of 82%. Digital manipulation to dilate the cervix was done in 10 ewes, only 2 survived (20%) and the rest died. The high success rate of the CS agrees with Majeed and Taha (1989).

The mean serum calcium levels of ewe with ringwomb were 7.03 ± 0.22 mg/dl (range, 6.11-8.63 mg/dl) and 7.59 ± 0.11 mg/dl (range, 6.9-8.5 mg/dl) for non affected (normal) ewes, the difference was significant ($P < 0.05$). This agrees with work by Stubbling (1971) who reported a lowering of serum

calcium levels in cases of ringwomb and suggested lack of tone of the smooth muscles of the cervix to be a possible cause. The mean serum glucose levels were 50.5 ± 0.26 mg/dl (range, 47.5-53.0 mg/dl) for affected ewes while 52.1 ± 0.22 mg/dl (range, 50.4-53.7 mg/dl) for the normal ewes, the difference was significant ($P < 0.05$). This partly explains the cause of the incomplete cervical dilatation, since during parturition there is increased demand for energy.

It was concluded, therefore, that low levels of both calcium and glucose were possible causes or predisposing factors for ringwomb and, caesarian operation is the method of choice for the correction of dystocia due to incomplete cervical dilatation in this species.

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