

DELIVERY OF AN ACHANDROPLASTIC "BULL DOG" LAMB IN A LOHI EWE

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Achondroplastic foetus is an hereditary condition caused by an autosomal recessive gene (Donald *et al.*, 1952). This trait has been disseminated by the widespread use of males of certain popular strains and subsequent close breeding. The mode of action of the genetic factor is unknown. Herrick and Eldridge (1955) and Herrick (1956) reported achondroplastic cases with cystic pituitary glands. What ever the mechanism is, it would appear most likely to be a pituitary adrenal dysfunction which leads to dystokia.

Case history

An 18-months old primiparous Lohi ewe was brought to the clinic of the Department of Animal Reproduction, University of Agriculture, Faisalabad with the history that the animal had completed normal gestation period. Animal started showing signs of lambing one day before and the water bag was expelled on the same day. Owner waited for delivery for about 18 hours.

Clinical examination

Clinical examination of the ewe revealed that the vital parameters were within their normal ranges (temperature: 102.5°F.; pulse rate: 70-90/min; respiration rate: 10-20/min) for sheep (Blood *et al.*, 1989). On vaginal examination, the cervix was found completely dilated and the fetus was engaged in the birth canal. The foetus was in the posterior dorso-sacral presentation with severe ascites and subcutaneous oedema, and vaginal delivery was not possible. A diagnosis of achondroplastic foetus was reached.

Treatment

For the evacuation of the subcutaneous fluid, an incision was given under the skin of the dead foetus with the help of scissor. This reduced the foetus size and the pelvis of the foetus came through the cervix, but still the delivery was not possible. Therefore, an incision was given on lower part of the belly to evacuate the abdominal fluid and to remove all visceral organs (Fig. 1). The fetus was removed through forced extraction (Arthur *et al.*, 1989), foetal membranes were removed and the following treatment was given:

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| 1. Utenol pessaries
(Star Lab, Lahore) | 3 I/U |
| 2. Oxytocin | 20mL I/M |
| 3. Norfloxacin 10%
(Doctorjin, Selmore, Korea) | 3mL I/M |
| 4. Vit B1, B3, B6 (Neurobione) | 3mL I/M |

Doctorjin and neurobion were repeated for 5 days. The owner was advised to give soft food. The animal recovered in 3 days.



Fig. 1: Achondroplastic foetus of Lohi ewe.

DISCUSSION

The incidence of developmental abnormalities in domestic animals is low. Generally, abnormal development is the product of both genetic and environmental factors (Colin, 1988). For a cell to function normally, the correct amount of genetic information, or gene dosage must be present. To regulate and interpret this information in each chromosome, there are two principal types of genes. The structural genes, which are responsible for

synthesis of various kinds of proteins in the cell; and the regulatory genes which regulate the activity of structural genes (Swanson *et al.*, 1981).

Abnormal karyotypes usually involve the loss or addition of a chromosome or deletion of a part of a chromosome with resulting incorrect gene dosage. This excess or deficiency of genetic information usually results in phenotypic abnormalities in several organs or systems (Degrouchy and Turlean, 1984). Karyotypic abnormalities have been demonstrated in most farm animals (Fretz and Hare, 1976; Fechheimer and Harper, 1980) and consist of modification of chromosomal number or structure (Eldridge, 1985).

It is believed that in the sheep population, fetopelvic disproportion is the commonest type of dystokia. Other occasional causes of sheep dystokia are uterine torsion, monstrosities, fetal duplication, fetal oedema and perosomus elumbis (Arthur *et al.*, 1989). In the majority of cases of foetal dystokia, delivery is achieved by correction and traction. In the present case there was severe subcutaneous oedema and ascites. The foetus was in posterior presentation with delayed second stage of labour (expulsion of foetus). In case of anasarca or achondroplastic conditions, the foetus is usually carried to term and concern is caused by the lack of progress in second stage of labour. This is due to great increase in the foetal volume caused by excessive fluid in the subcutaneous tissue, particularly of the head and hindlimbs. In the case of head, there is so much swelling that the normal foetuses are masked and the resultant appearance is quite grotesque. It is an interesting point that an undue proportion of the anasarca foetuses are presented posteriorly and the enormous swelling of the presenting limbs is very conspicuous (Arthur *et al.*, 1989).

It is not possible to give a set of indications for methods applicable to all the possible foetal dystokia. The veterinarian has to evaluate each case individually. In the majority of cases, delivery is achieved by correction and traction, with this technique dam may suffer from trauma to the pelvic organs and damage to pelvic nerves may occur. Caesarean section, laprothorotmy and foetotomy are other alternatives.

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