

X-Chromatin (Drumstick) Status of a Male West African Dwarf (WAD) Goat (Buck) with Unilateral Cryptorchidism: A Case Report

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ABSTRACT

A unilateral cryptorchid buck was screened for drumstick. Blood smears on microscope slides stained with Leishman, and observed under immersion oil light microscope revealed absence of drumsticks; thus indicated that the buck was an efficient male, with good potentialities for fertility. Therefore unilateral cryptorchids are not infertile and may be used for reproduction.

Key words: X-chromatin, drumstick, buck, testis, goat, cryptorchidism

INTRODUCTION

A case of one male West African Dwarf (WAD) goat (buck) with unilateral cryptorchidism of the right testis, source from Okehi village in Etche Local Government Area of Rivers State, Nigeria, was presented by Mr. H. C. Okere. This buck was estimated between 9 - 15 months old by gross visual estimation of the teeth. It was confirmed a unilateral cryptorchid after thorough visual inspection and manual palpation because of the absence of the right testis in the right scrotum (Figs. 1A and 1B). It has been running around in the village with other goats as they are free to do under the village system, the trait apparently unnoticed or oblivious to the owner.

Drumstick screening is a technique whereby the absence or presence of drumsticks can be used to assess the sex and potential of animal (Hare and Singh 1979; Bhatia and Shanker 1984, Berepubo 1996, Wekhe 1998). The buck was thus screened to assess its relevance in reproduction and breeding.

MATERIALS AND METHODS

One of the ears of the goat was shaved with sterilized razor blade, cleaned and thoroughly degreased and disinfected with commercial methylated spirit. It was allowed 1 - 3 minutes to dry properly. The ear vein was thereafter punctured with a sterile hypodermic needle. As blood dropped from the puncture, smears were made on already cleaned microscope slides. Four slides were prepared to forestall any mistake that could occur during staining. The cotton wool was placed over the bleeding ear and sprayed over with antibiotic. The goat was then released. The smeared slides were taken to the Department of Animal Science Laboratory of the Rivers State University of Science and Technology, Port Harcourt, Nigeria, where they were fixed with 90% ethanol for one minute, dried and then stained with Leishman stain for three minutes. The stain was washed off with clean tap water, and the slides blotted dry with filter paper. The slides were observed under $\times 100$ oil immersion objective of the light microscope. Eight hundred and thirty eight (838) neutrophils were counted.

RESULTS AND DISCUSSION

There was no drumstick observed among the 838 neutrophils counted. It implies that this buck is an absolute genetic male. Drumstick is a phenomenon of female animal where 2 - 10% is the expected normal range of occurrence (Hare and Singh 1979). Although proved normal male by drumstick analysis, it is also pertinent and curious enough to karyotype such animals to know their chromosomal status in order to give more credence to the drumstick diagnosis. The need for use of drumstick analysis to check fertility in livestock is an obvious fact. Except

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for the aesthetic appearance of a unilateral cryptorchid it should not be discriminated against in reproduction.



Fig. 1A. Ventral view of a unilateral cryptorchidism in the goat (buck)



Fig. 1B. Posterior view of a unilateral cryptorchidism in the goat (buck)

CONCLUSION

The unilateral cryptorchid buck was proved normal by drumstick analysis. This means that the buck was fertile and reproductive and could be used effectively except for the fact of transmitting the defect.

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