AN OUTBREAK OF CASEOUS LYMPHADENITIS OF GOATS ON AN LIBC FARM, DANGORA - NIGERIA

J.A. AMEH¹ AND J.O ADEKEYE²

¹. Department of Veterinary Microbiology, Faculty of Veterinary Medicine, University of Maiduguri, Maiduguri, Borno State

². Department of Veterinary Microbiology Ahmadu Bello University, Zaria.

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ABSTRACT

Clinical outbreaks of caseous lymphadenitis (CLA) of goats during July, 1990 and June, 1991 in Livestock Investigation and Breeding Centre (LIBC) Dangora, Kano State - Nigeria is reported. The out-break was found to be (26%) in the 100 goats examined. Clinical findings observed were palpable abscesses which occurred in the prescapular, prefemoral and submaxillary lymphnodes. Similar abscesses were also submaxillary lymphnodes. Similar abscesses were also found on the face and udder. The most frequently affected sites were prescapular lymphnodes with (42.28%) followed by submaxillary lymphnodes with (17.86%). Of the 26 goats affected, (61.54%) were males while (38.46%) were females. *Corynebacterium pseudotuberculosis* was consistently isolated from seven specimens out of the eight samples tested bacteriologically. One specimen, was negative to isolate as the animal was treated for other disease before sampling. It is suggested that caseous lymphadenitis is an important disease of goats in Nigeria and comprehensive studies on the Pathogenesis, epidemiology and the economics of the disease in Nigeria should be pursued.

Key words: Caseous lymphadenitis, goats, *Corynebacterium pseudotuberculosis*.

INTRODUCTION

Caseous lymphadenitis (abscessation of the lymphnodes) of goats has been reported but rarer than in sheep (Addo and Eid, 1978). In spite of the existing knowledge on the epidemiology of the disease, comparatively little is known about its pathogenesis (Ashfaq and

Campbell, 1980). Caseous lymphadenitis as a problem in Nigerian livestock has been reported (Addo and Eid., 1978, Addo and Dennis, 1977). Involved lymphnodes were distended by thick and often dry purulent exudate that was greenish white. The etiology has generally been accepted to be *C. pseudotuberculosis* (Ayers, 1977). Prescapular lymphnodes are the most common sites of superficial lesion development, and the lungs are the most commonly involved visceral organ (Runnels *et al*; 1967). Well documented epizootiological information, including morbidity, mortality and age incidence has apparently not been published for the disease as it occurs in goats. Methods of spread are also not known. It appears that close contact between animal is required for transmission to occur. Affected lymphnodes usually have no recognisable parenchyma remaining by the time they rupture spontaneously or at the time of surgical excision and the major source of infection is purulent material from opened abscesses (Ashfaq and Campbell, 1980; and Ayers, 1977).

Experimentally the disease has been transmitted by parenteral inoculation (Ashfaq and Campbell, 1980). The disease is common and identical with the disease in sheep including the high prevalence of thoracic disease which may take the form of a highly fatal, acut-bronchopneumonia (Williams, 1980). Although CLA is an important disease of goats in Nigeria, however, little information is available to assess losses due to condemnation of affected carcasses and parts of carcasses, and on the clinical incidence of CLA in the general goat population.

An outbreak of CLA in goats at a livestock investigation and breeding centre is here by reported.

MATERIALS AND METHODS

From July 1990 to June 1991, the goats in LIBC located in Dangora area of Kano State was regularly visited for research on goat mastitis. The goat population was one hundred, and clinical cases of caseous lymphadenitis were noticed and recorded during research visits to the farm.

Clinical Examination

Each goat was examined for enlarged or palpable, superficial lymphnodes. Evidence of previous infection of the lymphnodes as revealed by scars of old lesions, general conditions of the animal and the sex distribution of the affected one were noted and recorded at the time of examination.

Bacteriological Examination:

The abscesses were lanced with sterile surgical blades, and exudates from eight of such abscesses were evaluated by bacteriological method. The specimens were inoculated on to blood agar base containing 10% sheep blood, and MaConkey agar. The cultures were incubated aerobically at 37°C and examined daily for up to 72 hours for growth. Isolates were identified, using standard procedures for bacterial identification (Cowan and Steel, 1974).

RESULTS

Clinical Findings:

Twenty-six (26) percent of the goats had abscesses which were palpable (due to enlargement) in the prescapular, prefemoral, submaxillary lymphnodes and on the face and the udder. Table 1 indicates the anatomical distribution of the abscesses. Of the affected 26 animals, (61.54%) were males while (38.46%) were females.

Bacteriological Findings:

Seven of the eight cultured specimens yielded a gram positive pleomorphic rods, the biochemical reactions of which were consistent

with those of *C. pseudotuberculosis* (Cowan and Steel, 1974)

DISCUSSION

This work indicates that caseous lymphadenitis of goats affect the prescapular and submaxillary lymphnodes than other lymphnodes. The disease also affects both sexes of the animal.

Caseous lymphadenitis as a problem in Nigerian livestock has been reported (Addo and Eid, 1978; Addo and Dennis, 1977). Presently there is no reference in Nigeria on the economic losses from the disease in goats/sheep due to condemnation of carcasses, premature culling and deaths of affected animals. The cases recorded in this investigation was high enough to cause substantial economic losses, especially in Nigeria where goats are important sources of cheap meat and the "Morocco" leather (Addo and Eid, 1978).

Caseous lymphadenitis is nearly always a wound infection following shearing, docking and castration. In Nigeria wool shearing and tail docking are not routine operations carried out in goats and sheep and castration is very rarely done (Addo and Dennis, 1977). The possible route of infection in these cases could be tick bite since large number of ticks were recovered from different locations of the affected animals or other injuries. Most of them became lame as a result of severe tick bite.

Affected animals should be culled because they act as reservoirs of infection for other animals and they do not provide economic returns adequate to pay production costs (Stoops, 1984). Presently there is no adequate prophylaxis, treatment or diagnosis because the disease is insidious and tolerated by the animal until the condition becomes generalised. This may also explain the farm owners' apathy towards the disease (Stoops, 1984).

From this out break, CLA of goats appears an important disease, an understanding of the pathogenesis and epidemiology of the disease is necessary to develop new strategies for the prevention and control of disease.

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Table 1 ANATOMICAL LOCATION OF THE LESIONS

ANATOMICAL LOCATION	FREQUENCY OF LESIONS (Abscesses) + +	PERCENT SITE INVOLVEMENT
Prescapular lymphnodes	12	42.86
Submaxillary lymphnodes	5	17.86
Face	5	17.86
Udder	4	14.29
Prefemoral lymphnodes	2	7.14
Total	28	100

+ + Abscesses occurred in more than one location in two animals.