

Caseous Lymphadenitis in Pashmina (Changthangi) Goat

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SUMMARY

A male pashmina goat presented for postmortem examination at Pashmina farm of HMAARI Stakhna UT of Ladakh. There was abscessation of mediastinal lymph nodes containing thick caseous greenish yellow pus observed during postmortem examination. Hence based on the history and postmortem examination, histopathological nature of lesion, cultural characteristics and biochemical features of the isolated organisms bacterial disease caseous lymphadenitis was conformed. The caseous lymphadenitis abscess contained thick necrotic cheese like exudates with colors ranging from whitish-creamy to yellow with greenish tinge.

INTRODUCTION

Caseous lymphadenitis is a contagious bacterial infection of the lymph nodes in sheep and goats caused by *Corynebacterium pseudotuberculosis* which is a very short Gram positive rod that may appear coccoid on a slide preparation. A thick, flocculant outer lipid layer makes the bacteria highly pyogenic and leads to thick-walled abscess formation. The disease is manifested by local inflammation at the site of entrance of bacteria and abscessation of both internal and external lymph nodes (Glen 2000). The bacterium which is the etiological agent of caseous lymphadenitis (CLA) and lymphadenitis which is characterized by abscess formation in almost all organs in sheep and goats and other animal species respectively. The entry to the host is mainly through non-intact skin such as open wounds and abrasions (Fontaine and Baird, 2008) and also mucous membrane (Windsor, 2011). However, other routes have been described in detail by Jesse *et al.* 2013 and Adza Rina *et al.* (2013). The incubation period of caseous lymphadenitis ranging between 25 to 140 days. The slow nature of Caseous lymphadenitis lesions development makes it chronic and may become lifelong disease; this fact is often overlooked. The caseous lymphadenitis abscess contains thick necrotic cheese like exudates with colors ranging from whitish-creamy to yellow with greenish tinge reported by Dorella *et al.*, 2006. The bacterium is extraordinarily durable, apparently able to survive in soil for months to years, even in dry climates with substantial sun exposure commonly found in the soil on farms with infected animals. It causes the development of abscesses within the lymph nodes of infected sheep and goats. Abscesses can form as soon as 2 weeks after exposure to the organism, although it can take several months for abscesses to develop in some cases. Infection occurs through contact with pus containing the organism, which commonly occurs when an infected animal develops a draining wound emanating from an infected lymph node. The draining material may be directly transferred to another animal through contact, or it may contaminate the soil, bedding, water, or feed and be transferred through these routes. In dairy sheep and goats, contaminated milking machines can spread the organism. The organism can also be spread by shearing equipment, combs, or other tack that is contaminated with pus. Flies may spread the organism from one animal to another by feeding on infected material and moving to another animal to feed on a wound. Macroscopically, the most common lesions seen in the affected lymph nodes and to lesser extent in internal organs were caseous abscess filled with greenish yellow pus. When palpated they were soft and pasty but in some findings, the pus was firm and dry on cross sectional cutting. The pus has a characteristic of laminates or “onion ring” appearance. The range and frequency of anatomical sites affected with CLA (cheesy gland lesion)

Overall, superficial lymph nodes were affected more frequently than visceral ones. Parotid lymph node was most affected followed by pre scapular lymph nodes. The disease is highly contagious and the causative agent can survive in feces, straw, hay and wood for several weeks. Pashmina Goats in changthang region are reared largely by nomadic changpas where the management system is traditional and poor. These pastoral area are featured by thorny bush encroachment which frequently cause cutaneous trauma that favor entrance of the bacteria. On the other hand the common behavioral habit amongst goats of frequent licking as well as rubbing their heads and necks against bushes and sheds, allows the rapid spread of Caseous lymphadenitis.

CONCLUSION

The bacterium which is the etiological agent of caseous lymphadenitis (CLA) and lymphadenitis which is characterized by abscess formation in almost all organs in sheep and goats and other animal species respectively. The superficial lymph nodes were affected more frequently than visceral ones. Parotid lymph node was most affected followed by pre scapular lymph nodes. The disease is highly contagious and the causative agent can survive in feces, straw, hay and wood for several weeks.

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