

Case Report



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**Caseous Lymphadenitis in a non-descript cattle:
A rare case report**

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Abstract

A delayed case of Non-descript cow was presented with anorexia, multiple swellings on the head and sub-mandibular region which developed progressively in three weeks. Upon physical examination, the superficial lymph nodes (Sub-Mandibular, Pre-Scapular, Parotid) were abnormally swollen. Fine needle aspiration (FNA) revealed thick caseous pus from the swellings. Blood sample and pus swabs sent to the laboratory were suggestive of Caseous lymphadenitis. Though advised to cull the animal initially, an attempt of treatment was made with Penicillins, Potassium Iodide and NSAIDs upon farmer's request who was emotionally engaged with animal. But, later, due to the owner's compliance issues, the treatment was discontinued and the farmer voluntarily culled the animal. The village was put under surveillance for the report of similar cases. In India, the disease in cattle has rarely been recorded and to the best of our knowledge, this case could be in the first few reports of the superficial form of caseous lymphadenitis in adult cattle. This communication recommends the establishment of screening and control programme of caseous lymphadenitis in India.

Keywords: Caseous lymphadenitis, Lymph nodes, superficial, abscess

Introduction

Caseous lymphadenitis (CL) is a bacterial disease caused by Gram-positive bacteria called *Corynebacterium pseudotuberculosis*, which can survive for years in the atmosphere (Dorella et al., 2006). Majorly a disease of Small ruminants, the prevalence rates varied amongst the countries, where cattle, buffalo, wild animals and human are also susceptible. CL is spread amongst animals by direct contact with superficial wounds or draining abscesses (Soares et al., 2013; Ivanovic et al., 2009), however, the source of natural infection and the means of entry into cattle are not well documented (Sood et al., 2012). In affected animals, abscess formation is seen in peripheral lymph nodes in external/superficial form and (Çetinkaya et al., 2002) in deep lymph nodes or

internal organs in internal form. In India, the disease has previously been reported in small ruminants (Garg and Chandiramani, 1985; Ghanbarpour and Khaleghiyan, 2005) and in cow calf from Punjab (Sood et al., 2012). The disease causes wasting, reduction in milk quantity and quality and rejection of carcass at slaughter which cause direct economic losses on the part of farmer (Paton et al., 1994). The present case report describes a rare case of superficial form of caseous lymphadenitis and the observations recorded in adult cattle.

Clinical history and Observations

A delayed case of Non-descript cow was presented to a Veterinary Dispensary in East Godavari district of Andhra Pradesh with the history of multiple swellings on the head and sub-mandibular region which were

developed progressively in three weeks and anorexia since three days. A thorough physical examination was performed and the following observations were recorded., temperature (103.6 f), respiratory rate (24/min), pulse(68bpm) and rumen motility(two/min) where the Sub-Mandibular, Parotid (Fig.1), Pre-Scapular (Fig.2) superficial lymph nodes were found easily palpable and abnormally hard and enlarged.

The consistency of dung and urination status of the animal was normal. Fine needle aspiration (FNA) was performed to examine the contents of swelling and FNA revealed thick caseous material which hardly drained upon aspiration. Blood sample and swabs from lymph nodes were collected for laboratory confirmation.



Fig.1. Image showing the enlarged lymph nodes in the head region.



Fig. 2. Image showing the enlarged Pre-Scapular lymph node grasped in hand

Treatment and Discussion

Because of the requirement of sustained, uneconomical antimicrobial therapy with chances of recurrence (Hussain et al., 2013), and which also requires repeated visits to the veterinary dispensary, the farmer was suggested to cull the animal which also helps to prevent the spread of disease in the herd. However, the farmer being emotionally engaged requested to attempt treatment. The animal was put on Dicrysticin-S (Procaine Penicillin-G: 15,00,000 IU, Penicillin G Sodium: 5,00,000 IU; Streptomycin: 2.5gm) @ 2.5gm BID I/m, Potassium Iodide @ 10gm PO Daily, Tolfenamic acid @ 4mg/kg BW I/m. But, due to the owner's compliance issues, the treatment was discontinued and the farmer voluntarily culled the animal. The herd and adjoining villages in the

jurisdiction were put under surveillance for the report of similar cases.

There were reports in small ruminants which recovered upon Prolonged therapy with Penicillins (Hussain et al., 2013) or therapy with Tulathromycin (Washburn et al., 2013). So, Antimicrobial therapy with Penicillins or Tulathromycin may be beneficial in the treatment of caseous lymphadenitis. There is an increasing trend of reports of Caseous lymphadenitis across the country which could be attributed to neglected quarantine and biosecurity measures. Though the economic losses in cattle are not documented, losses similar to that of small ruminant sector can occur. Examination for lesions, serologic screening at purchase and a period of quarantine before the introduction of new animals with strict biosecurity are necessary to prevent the introduction of disease newly.

Conclusion

To the best of our knowledge, this case could be in the first few reports of the superficial form of caseous lymphadenitis in adult cattle with extensive abscessation of multiple superficial lymph nodes and alerts for the importance of the establishment of screening and control programme of caseous lymphadenitis in India.

References

- Cetinkaya, B., Karahan, M., Atil, E., Kalin, R., De Baere, T., and Vanechoutte, M. 2002. Identification of *Corynebacterium pseudotuberculosis* isolates from sheep and goats by PCR. *Veterinary microbiology.*, 88(1), 75-83.
- Dorella, F. A., Pacheco, L. G. C., Oliveira, S. C., Miyoshi, A., and Azevedo, V. 2006. *Corynebacterium pseudotuberculosis*: microbiology, biochemical properties, pathogenesis and molecular studies of virulence. *Veterinary research.*, 37(2), 201-218.
- Garg, D.N., Nain, S.P.S. and Chandiramani, N.K. 1985. Isolation and characterization of *Corynebacterium ovis* from sheep and goats. *Indian Veterinary Journal.*, 62: 805-808.
- Ghanbarpour, R. and Khaleghiyani, M. 2005. A study on caseous lymphadenitis in goats. *Indian Veterinary Journal.*, 82: 1013-1014.
- Hussain, S. A., Ali, M., Turkar, S., Hassan, N., Raisul-Islam, M., and Dar, L. M. 2013. Caseous lymphadenitis in goats: First report of two clinical cases from Punjab (India). *Microbiologia.*, 39: 44-46.
- Ivanovic, S., Zutic, M., Pavlovic, I. and Zujovic, M. 2009. Caseous lymphadenitis in goats. *Biotechnology in Animal Husbandry.*, 25: 999-1007.
- Paton, M.W., Rose, I.R., Hart, R.A., Sutherland, S.S., Mercy, A.R., Ellis, T.M., and Dhaliwal, J.A. 1994. New infection with *Corynebacterium pseudotuberculosis* reduces wool production. *Aust. Vet. J.*, 71: 47-49.
- Soares, S. C., Silva, A., Trost, E., Blom, J., Ramos, R., Carneiro, A. and Barbosa, E. G. 2013. The pan-genome of the animal pathogen *Corynebacterium pseudotuberculosis* reveals differences in genome plasticity between the biovar ovis and equi strains. *PLoS One.*, 8(1), e53818.
- Sood, N.K., Sandhu, B.S., Gupta, K., Narang, D., Vasudeva, K. and Singh, N.D. 2012. Mesenteric caseous lymphadenitis in a cow calf caused by *Corynebacterium pseudotuberculosis*: A case report. *Veterinarni Medicina.*, 57: 371-375.
- Washburn, K. E., Fajt, V. R., Lawhon, S. D., Adams, L. G., Tell, L. A. and Bissett, W. 2013. Tulathromycin concentrations in interstitial fluid from tissue chambers inoculated with *Corynebacterium pseudotuberculosis* following subcutaneous or intra-chamber administration: A Caprine abscess model. *Antimicrobial Agents and Chemotherapy.*, AAC-00936.

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