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RESEARCH ARTICLE

A FIELD REPORT ON DIAGNOSIS AND SUCCESSFUL TREATMENT OF BACTERIAL ENDOCARDITIS IN BOVINE

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ABSTRACT

Eleven cattle clinically presented with history of reduced feeding and altered other habits. Examination revealed sluggish movement and tachycardia. Auscultation was suggestive of heart disease. Three cattle died of same symptoms at different times were also included in this study. Laboratory examination of ante- (8 cattle) and post- mortem (3 cattle) samples confirmed Viridans Streptococci and was found sensitive to Cefotaxime and Streptomycin sulphate. All animals treated with 5gm Cefotaxime parenterally daily for 5 days. 9 cattle recovered and two died.

Key words:

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INTRODUCTION

Incidence of bacterial endocarditis in bovine is rare and challenging condition to be diagnosed and treated in field. Such cases are diagnosed and treated with 82% success rate.

MATERIAL AND METHOD

Eleven ailing and three dead cattle were taken in this two year study. Five bullocks and six cows, aged upto 5 years, were presented with history of anorexia, dullness and sluggish routine habits since 2-5 days. Clinical examination revealed tachycardia (102 – 120bpm), heart sounds also audible beyond cardiac area and in some cases weakness and edema of left forelimb noticed. Pathognomonic oral lesions like exfoliated deciduous tooth cavity, erupting molar, gingivitis, ulcerated wound and halitosis observed.

Incidental post-mortem examination of above three dead cases revealed some of the pathognomonic oral lesions and vegetative growths on endocardium. Samples were collected from 8 clinically presented and the 3 dead cattle. Culture and ABST examination revealed Viridans Streptococci. The organism was found to be sensitive to Cefotaxime. All animals

were treated only with 5 gm Cefotaxime (Taxim - Alkem) intravenously once daily for 5 days.

RESULT

Three bullocks and five cows showed complete recovery with return of usual habits after 4 days and one more bull showed the same after 5th day. Remaining two cows showed no positive response and died during and after treatment. Post-mortem examination revealed vegetative growth on endocardium.

DISCUSSION

In bovine, between shedding of deciduous tooth and eruption of permanent tooth is a critical period during which the infectious organisms gain entry into dental cavity. Also other causes like periodontitis/ gingivitis host the pathogens in dental cavity. (Richard J. Ham *et al.*, 2014)

As cited by Silverman *et al.*, 2002, blood-borne bacteria gain entry into the blood stream following bleeding from the mouth/ other systems. This causes severe infection of cardiac valves and supporting endocardial structures. Oral origin of bacterial endocarditis is mainly attributed by alpha haemolytic

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Streptococcus i.e., Viridans Streptococci. This causes sub-acute endocarditis which later becomes fatal.

The organisms stick to pre-formed platelet thrombi vegetations found on cardiac endothelium and proliferate. Continued deposition of platelet and fibrin over the proliferating bacteria prevents phagocytosis and thus characteristic vegetation is formed. Also the bacteria disseminate to other parts of the heart. The vegetation itself, and even upon healing, the scar tissue leads to valvular insufficiency (Silverman loc cit). Lindsay *et al.*, 2010, recommends Cefotaxime to treat infectious endocarditis.

Diagnosis by culture of the blood samples in blood agar is evident of Viridans Streptococci which forms green coloured alpha-hemolytic zone. ABST revealed sensitivity of the organism to Cefotaxime and Streptomycin. In this study, treatment with Cefotaxime 5gms once daily for 5 days proved effective.

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Summary

Bacterial endocarditis of oral origin diagnosed and successfully treated with Cefotaxime.

Reference

- Lindsay Grayson, M., Suzanne M Crowe, James S McCarthy, John Mills, Johan W Mouton, Ragnar Norrby, S., David L. Paterson and Michael A Pfaller, 2010. Kucer's The use of antibiotics, 6thedn., Vol2, CRC Press, USA. pp.333.
- Richard J. Ham, Philip D. Sloane, Gregg A. Warshaw, Jane F. Potter and Ellen Flaherty, 2014. Ham's Primary Care Geriatrics: A Case-Based Approach, Elsevier Health Sciences, 6thedn., Elsevier Saunders, Philadelphia. pp.570.
- Sol Silverman, Lewis R. Eversole and Edmond L. Truelove, 2002. Essentials of oral medicine, BC Decker Inc., US. pp.160, 161.
- Sravanthi Patri and Vijay Kumar Matham, 2009. Vet's Ready Reckoner, New India Publishing, New Delhi. pp.7.
- Quinn, P.J., Markey, B.K., Leonard, F.C., FitzPatrick, E.S., Fanning, S. and Hartigan, P., 2011. Veterinary Microbiology and Microbial Disease, 2ndedn., Wiley-Blackwell, UK. pp.803.

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