

## IDENTIFICATION OF BOVINE PAPILLOMA VIRUS BY ELECTRON MICROSCOPY IN CATTLE- A CASE REPORT

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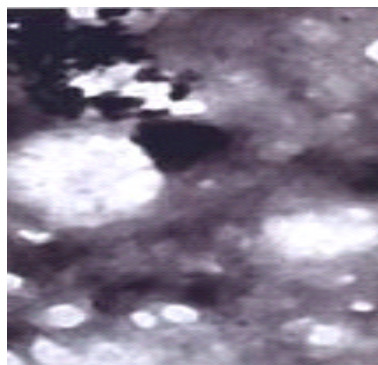
### INTRODUCTION

Papilloma Virus an epitheliotropic double stranded DNA virus, is a member of the family papillomaviridae, which is more commonly affecting cattle and also found infecting the human beings. The virus has been implicated as a cause for cancer and mortality (Campo,2003) when it is associated with many other factors. It develops cutaneous papillomatosis and benign proliferative lesions in cattle, therefore leads to severe economic impacts (Jelinek and Tachezy, 2005 and Boiron et al., 1965), Animals of less than two years old are highly susceptible to the infection and affected animals may recover in a month or an year, due to spontaneous healing nature of the virus.

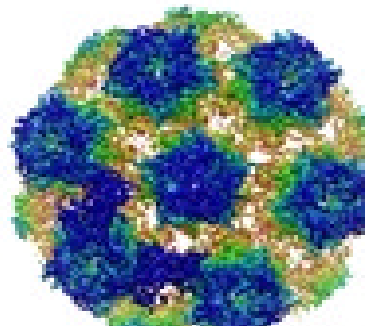
### CASE HISTORY AND CLINICAL OBSERVATION

A three year old crossbred cow which was having many small wart like growths over the left side of the neck and shoulder was examined. The growths were palpated to be of semi solid to rough in consistency. Scraping of dried scabs from the raw growths revealed bleeding the scabs. Dry scabs from the growths were collected in phosphate buffer saline (PBS) and then finely smashed in pestle and mortar. The content was then transferred to a microfuge tube and spun at 5,000 rpm for 10 minutes at 4°C . The supernatant was collected and again centrifuged at 14,000 rpm for 20 minutes at 4°C. The supernatant was discarded and the small fine pellet left at the bottom of the microfuge tube was mixed and a small drop of this suspension was used for the electron microscopic study.

**ELECTRON MICROSCOPIC STUDY (EM) :** This study was carried out in the Centralized Instrumentation Laboratory (CIL), Madras Veterinary College, Chennai-7. The electron microscopic study revealed the presence of Bovine Papilloma Virus under 100,000 magnification and is presented below in comparison with on line source electron microscopic structure of papilloma virus.



Papilloma Virus Identified by Electron Microscope



Papilloma virus Reference Structure by Electron Microscope – 4.2 A resolution On line source.

## TREATMENT AND DISCUSSION

The growths were cleaned with tincture iodine. Additionally the animal was treated with antibiotics and vitamin injection in order to control associated infections and to improve the health status of the animal. It was observed that most of the growths were dried and fall off the skin in a week time.

The semi solid, wart like growths that were found on the lateral portion of the left side of the neck and shoulder of cattle in the present study were examined by electron microscopy. The growths were found healed quickly following treatment with turmeric powder and tulsi leaves. In contrast to the present findings Jana and Ghosh (2010) after examination and treatment of a cattle with big, rough, horny, irregular, ugly looking wart growths, reported that growths were found to be nonresponsive to oral treatment of Thuja and they attributed this problem to development of different lesions that caused by different types of papilloma viruses.

## REFERENCES

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- Jana, D., and Ghosh, M. (2010). Persistent cutaneous bovine papillomatosis in an indigenous heifer and its successful management, *Indian J.Field Vet.* **5**: 75.
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**1<sup>st</sup> annual conference of a newly emerging Society for Veterinary Sciences and Biotechnology is to be held shortly . Venue and exact date will be announced soon. For details participants may contact to :**

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