

Radiological Diagnosis of Horn Cancer

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Abstract

Twelve clinical cases of horn cancer in bovine were explored for radiological examination. The tentative diagnosis based on clinical sign and percussion was confirmed on radiological findings. There was loss of architecture of sinus plates with negative air contrast indicating osteolytic changes in horn. In advanced cases, there was dense soft tissue occupying horn core without demarcating the osseous landmarks. Whereas, in normal and healthy horn the septal plates with negative air contrast and normal architecture was visualized. Thus radiological examination will be helpful for confirmatory diagnosis of horn cancer in early stage also.

Keywords: Radiology, Horn cancer, Bovine, Diagnosis,

Introduction

Horn cancer is very common condition in bullocks. Horn cancer can be tentatively diagnosed with the specific history, typical clinical appearance of horn and percussion. Usually the condition is diagnosed when typical symptoms like asymmetry or deviation of horn and increased diameter of the horn base is seen. Amputation of horn is advised immediately for the treatment. Most of time owners are interested to save the horn for cosmetic look. For confirmatory diagnosis which is difficult in early stage where the symptoms are not clear. So, the present study was undertaken to perform confirmatory diagnosis of suspected cases of horn cancer with radiological examination.

Material and Methods

A total of twelve case of horn cancer tentatively diagnosed on clinical signs were undergone radiological examination of affected horn

at Department of Surgery and Radiology, Veterinary College, Udgir. The radiological examination was performed with the objective to confirm integrity of sinuses, pericranial osseous structures and septal plates in the frontal sinus.

The animals were sufficiently prepared and restrained properly for radiography. The 8"x10" film was loaded and lateral and cranio-caudal radiographs of affected horn were taken by keeping KV-50, MAS-6.5,FFD-90 cm for each animal. In the similar manner radiograph of normal horn was taken for comparison.

Results and Discussion

There was characteristic radiological difference between early and advanced stage of horn cancer. In early stage of horn cancer, there was loss of architecture of sinus plates with negative air contrast indicating osteolytic changes in horn (Fig.1B). In advanced cases of horn cancer, there

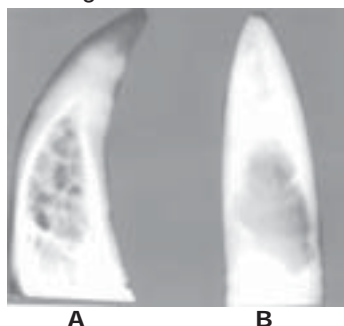


Fig-1 : Showing radiological presentation in early stage of horn cancer (B) & compared with normal horn (A)

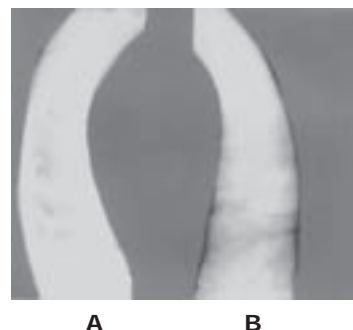


Fig-2 : Showing radiological presentation in advanced stage of horn cancer (B) & compared with normal horn (A)

was dense soft tissue occupying horn core without demarcating the osseous landmarks (Fig.2B). Whereas, in normal and healthy horn, the septal plates with negative air contrast and normal architecture was visualized (Fig.1A and 2A). The normal horn having sinus filled with air revealed negative contrast whereas in affected cases the space were filled with cancerous tissue lead to loss of architecture and demarcation of osseous landmarks. Present findings are in agreement with Chauhan(1980) and Naik,et.al.(1989).

Hence, it is concluded that in affected cases of horn cancer, there is loss of architecture of sinus plate, disintegrity of sinus plates and pericranial osseous tissues. Also, there is appearance of soft tissue mass in the horn core. This radiological examination of horn will be helpful for confirmatory diagnosis of horn cancer in suspected cases.

References

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Study will assess animal climate impacts

The Met Office is to investigate the increasing effects of climate change on animal and plant health over the coming decades, it announced this week. The Hadley Centre-based body is to host a series of workshops exploring the issues, following the current mild winter that it predicts will become the norm in the 21st century.

"The arrival of Bluetongue disease in the UK in recent years is evidence that changing climate is already impacting animal health," explained John Gloster, Met Office Research Scientist. "The Met Office, working with other interested parties, is taking the lead in providing the advice and solutions government, veterinary experts and farmers will need to mitigate against the effects of climate change on animal and plant health in the future."

Defra, the NFU, the Veterinary Laboratory Agency and the Biotechnology and Biological Sciences Research Council (BBSRC) will be involved in the Met Office's project.

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