



ISSN (E): 2277-7695

ISSN (P): 2349-8242

NAAS Rating: 5.23

TPI 2022; SP-11(11): 408-409

© 2022 TPI

www.thepharmajournal.com

Received: 16-08-2022

Accepted: 20-09-2022

Lalrinkima

Assistant Professor, Department of Veterinary Pathology, Khalsa College of Veterinary and Animal Sciences, Amritsar, Punjab, India

Shafiqur Rahman

Assistant Professor, Division of Veterinary Pathology, FVSc & AH, SKUAST, Jammu, Jammu and Kashmir, India

Aditya Sharma

Assistant Professor, Department of Veterinary Pathology, Khalsa College of Veterinary and Animal Sciences, Amritsar, Punjab, India

Kabal Singh Brar

Assistant Professor, Livestock Farm Complex, Khalsa College of Veterinary and Animal Sciences, Amritsar, Punjab, India

Shagufta Azmi

Professor & Head, Department of Veterinary Pathology, Khalsa College of Veterinary and Animal Sciences, Amritsar, Punjab, India

Corresponding Author:

Lalrinkima

Assistant Professor, Department of Veterinary Pathology, Khalsa College of Veterinary and Animal Sciences, Amritsar, Punjab, India

Pathomorphological study on bovine papilloma: A case report

Lalrinkima, Shafiqur Rahman, Aditya Sharma, Kabal Singh Brar and Shagufta Azmi

Abstract

A 5-year-old male Sahiwal breed of cattle was presented with a history of abnormal multiple growth on the skin. Clinical examination revealed cauliflower like growth near the brisket, neck, shoulder, back and the lumbar region. Histopathological examination showed hyperkeratosis, finger like projection along with distinct fibrovascular stroma. Based on gross observations and histopathological characteristic, it was diagnosed as papilloma. The animal was treated with anthiomaline and it was found to be effective with complete recovery with no recurrence.

Keywords: Bovine, papilloma, gross, histopathology

Introduction

Papilloma tumor or warts are benign tumor of an epithelial surface found in almost all type of animals. The bovine papilloma commonly known as warts are caused by bovine papilloma virus which result in the proliferation of skin cells and development of verruciform lesions in cattle [1]. Miller and West [2] reported that the lesion are mainly on the head, dewlap, brisket, neck, shoulder. The diseases can appear in cattle of any age group, but it is more commonly seen in young animals of less than two years old [3]. Bovine papilloma virus infection does not usually cause livestock death, but result in slow growth, weight loss and decreased milk production [4]. Prasad *et al.* [5] reported that the infection is more common in imported (*Bos Taurus*) and cross-breed cattle than in the native Indian cattle (*Bos Indicus*). For treatment of papilloma different methods have been used such as autoimmune therapy, surgical excision, cryotherapy and lithium antimony thiomalate [6, 7].

Material and Methods

Case history

A 5-year-old male, Sahiwal breed of cattle was presented with a history of abnormal multiple growth near the brisket, neck, shoulder, back and lumbar regions. Tissue sample from the animal was collected in 10% neutral buffer formalin (NBF) for histopathological examination.

Histopathology

Fixed tissue sample were dehydrated in a series of increasing ethanol concentrations (70%, 80%, 90%, 95%, 100% Alcohol I & II) for one hour each, followed by clearing with xylene I and II for 1 hour. The tissues were infiltrated in paraffin wax I and II for 2 hours each, and then implanted in a paraffin block using a paraffin embedding set. Paraffin embedded tissue sections were cut into 4µm thickness, and then stained with haematoxylin and eosin (H&E) [8]. The slides were viewed under light microscopy.

Treatment

The treatment of the animal was carried out by administration of anthiomaline (lithium antimony thiomalate) at the dose rate of 15 ml deep intramuscularly on interval of 48 hours for 2 days.

Results and Discussion

Grossly, the warts are dry, rough, with various sized mass of cauliflower-like growth spread near the brisket, neck, shoulder, back and the lumbar region (Fig.1a & b). Histopathological examination revealed hyperkeratosis, finger-like projection along with distinct fibrovascular

stroma (Fig.2). The case was treated with anthiomaline therapy at the dose rate of 15 ml deep intramuscularly at an interval of 48 hours for 2 days and it was found to be effective with complete recovery without any reported recurrence.

Papilloma is a common contagious and self-limiting disease among bovine. Initially, the neoplasm grows in the area around the brisket region and spread to the neck, shoulder, back and lumbar region. Miller and West [2] have earlier reported that papilloma is commonly observed in the head, dewlap, brisket, neck, shoulder and leg region which concurred with our findings. Animals between 3 months to 8 years of age were usually affected which is similar to our findings [9]. Histopathological examination of tissue biopsy usually shows hyperkeratosis and finger-like-projection along with distinct fibrovascular stroma [10, 11].

In the present study, hundred percent recovery was obtained after treatment with anthiomaline which corroborate with the findings of Kavithaa *et al.* [12]. It may be concluded that anthiomaline therapy can be used successfully to treat cases of papilloma in cattle without recurrence.

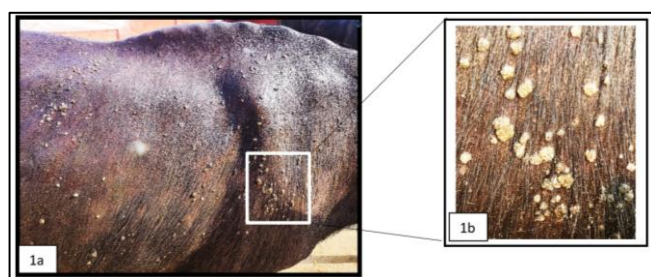


Fig 1(a): Papillomatous growths with wart/nodule like structure on different parts of the body.
(b): Cauliflower like growth on the skin

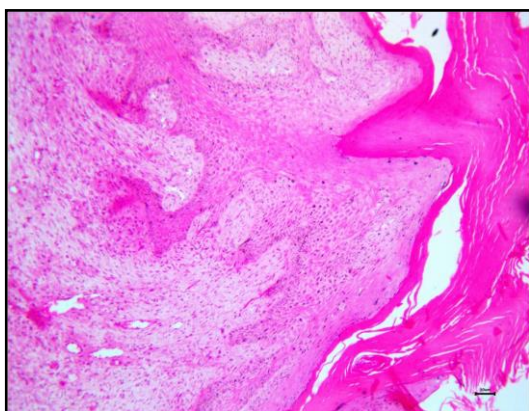


Fig 2: Hyperkeratosis along with finger like projection

Acknowledgment

The author would like to acknowledge Livestock Farm Complex, Khalsa College of Veterinary and Animal Sciences for providing the sample.

Conflict of interest

The author report no conflict of interest financial or otherwise

References

1. Bocaneti F, Altamura G, Corteggio A, Velescu E, Roperto F, Borzacchiello G. Bovine Papillomavirus: new insights into an old disease, *Transbound Emerg Dis.* 2016;63:14-23.
2. Miller WC, West GP. *Blacks Veterinary Dictionary.* 10th

- edn, Adam and Charles Black, London; c1972. p. 10.
3. Olson C, Olson RO, Hubbard-Van Stelle S. Variations of response of cattle to experimentally induced viral papillomatosis. *J Am. Vet. Med. Assoc.* 1992;201:56-62
4. Bocaneti F, Altamura G, Corteggio A. Detection of bovine papillomavirus -1/-2 DNA by classical PCR from spontaneous cutaneous fibropapillomas in cattle, *Revista Romana de Medicina Veterinaria.* 2014;57(1-2):49-52.
5. Prasad CB, Singh MP, Deokioulivar UK. A note on successful treatment of generalized cutaneous papillomatosis with autogenous vaccine in cross-breed cattle. *Indian Vet. J.* 1980;57:950-952
6. Dileepkumar KM, Ansari Md M. Clinico-therapeutic management of cutaneous papillomatosis in a buffalo calf. *Intas Polivet.* 2012;13(I):67-69.
7. Ghim S, Newsome J, Bell J, Sundberg JP, Schlegel R, Jenson AB. Spontaneously regressing oral papilloma induce systemic antibodies that neutralize canine oral papilloma virus. *Exp. Mol. Pathol.* 2000;68:147-151
8. Suvarna KS, Layton C, Bancroft JD. *Bancroft's Theory and Practice of Histological Techniques.* 8th edn, Elsevier Health Sciences, Philadelphia; c2018.
9. Jaglan V, Singh P, Punia M, Lather D, Saharan S. Studies on Pathology and Therapeutic Efficacy of Anthiomaline in Bovine Papillomatosis. *Int. J Curr. Microbiol. App. Sci.* 2018;7(7):2562-2567.
10. Al-Salihi KA, Al-Dabhawi AH, Ajeel AA, Erzuki IA, Ali TAH. Clinico-histopathological and immunohistochemical study of ruminant's cutaneous papillomavirus in Iraq. *Vet. Med. Int;* c2020. p. 1-11.
11. Ayman, U, Das SK. Histo-morphology of cutaneous papillomatosis in indigenous cattle, *Bangl. J Vet. Med.* 2019;17(1):47–52.
12. Kavithaa NV, Rajkumar NV, Jiji RS. Papillomatosis in Jersey cows and its medical treatment. *Int. J Sci. Environ. Tech.* 2014;3(2):692-694.