OPEN ACCESS

CASE REPORT

Myrmecia (Deep Palmoplantar Wart) on Dorsal Surface of Distal Interphalangeal Joint: A Case Report.

Madhu Sigdel

Department of Pathology, Rapti Academy of Health Sciences, Dang, Nepal.

Article Info:

Received Date: 5 Apr, 2024

Acceptance Date: 15 Jun, 2024

Corresponding Author:

Madhu Sigdel
Lecturer,
Head of Department of Pathology,
Rapti Academy of Health Sciences
Ghorahi, Dang, Nepal.
Email: madhu.elixir8@gmail.com

Funding sources: None

Conflict of interest: None

Access the article online

DOI: doi.org/10.70027/jrahs9

Abstract

Cutaneous warts are common skin condition mostly affecting young adults and are caused due to human papilloma virus. Deep palmoplantar warts are commonly caused by HPV-1 and present as tender nodules or papules commonly occurring on the palms and soles; as well as on the lateral aspects and tips of the fingers and toes. The aim of this case study is to report one case of 25 years old female presented in skin OPD with painful nodule on dorsal surface of distal interphalangeal joint of little finger (5th finger) of left hand. This is rare and unique site for occurrence of myrmecia and no case report of myrmecia at this site has been reported till date.

Keywords: Human papilloma virus, myrmecia.

Introduction

Papillomavirus is a circular double-stranded non-enveloped DNA virus that belongs to Papillomaviridae family,[1] it enters the mucosal and cutaneous epithelium through small cuts and abrasions. Once virus infects the cell, incorporates its DNA with the host genome and uses the host's machinery to reduplicate viral DNA and proteins. The dysregulation of host's gene expression by viral proteins causes abnormal cell proliferation.[2] Until now, over 200 distinct types of HPV have been identified. Most HPV types can cause common skin warts by infecting the cutaneous epithelium. Almost 40 types infect the mucosal epithelium and associated with cervical cancer.[3] Deep palmoplantar warts are commonly caused due to HPV-1 infection, but can also be seen with HPV-60, -63, and -65.[1]

Case Report

A 25 years old female presented in orthopedic OPD with tender nodule on distal interphalangeal joint of 5th finger of left hand. She gives history of trauma at the same site 3-4 month back followed by small papular lesion. The lesion increased in size and became tender since one month. Past history and family history is non-significant. Laboratory investigations including complete blood count, random blood sugar were within normal limits and serology for HIV, HbsAg, and HCV was negative. The growth was excised and sent to pathology department in 10% formalin for diagnosis.

Grossly, the specimen consisted of a grey white irregular skin tissue measuring 1.2×0.7x0.5cm and cut sections showed solid homogenous areas. The hematoxylin and eosin-stained sections showed skin tissue with epidermis

Citation:

Sigdel M. Myrmecia (Deep Palmoplantar Wart) on Dorsal Surface of Distal Interphalangeal Joint: A Case Report. J. Rapti A. Health Sci. 2024;1(1):61-63.

showing papillomatous growth with hyperkeratosis and parakeratosis. The papillae were lined by markedly acanthotic stratified squamous epithelium with presence of a thin granular layer and occasional koilocytosis. Prominent eosinophilic intracytoplasmic inclusion bodies were noted on upper Malpighian layer keratinocytes. Scant underlying dermis was unremarkable. (Fig 1 and 2 A,B). We did not perform the test for human papilloma virus. The lesion has not recurred after one year of complete excision. (Fig. 3)

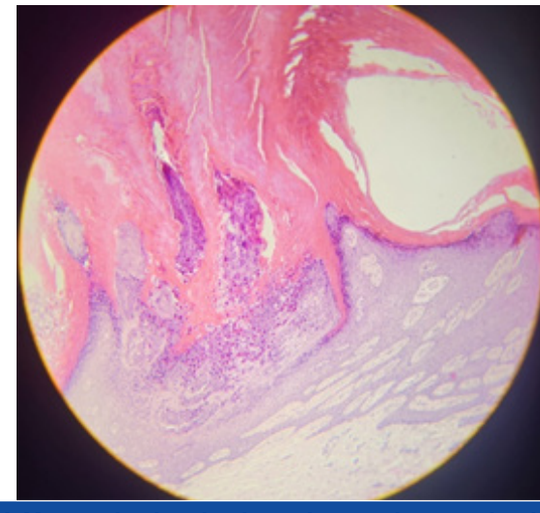

Fig 1: Myrmecia showing hyperkeratosis, acanthosis and papillomatosis (H&E ×200. H&E, hematoxylin and eosin)

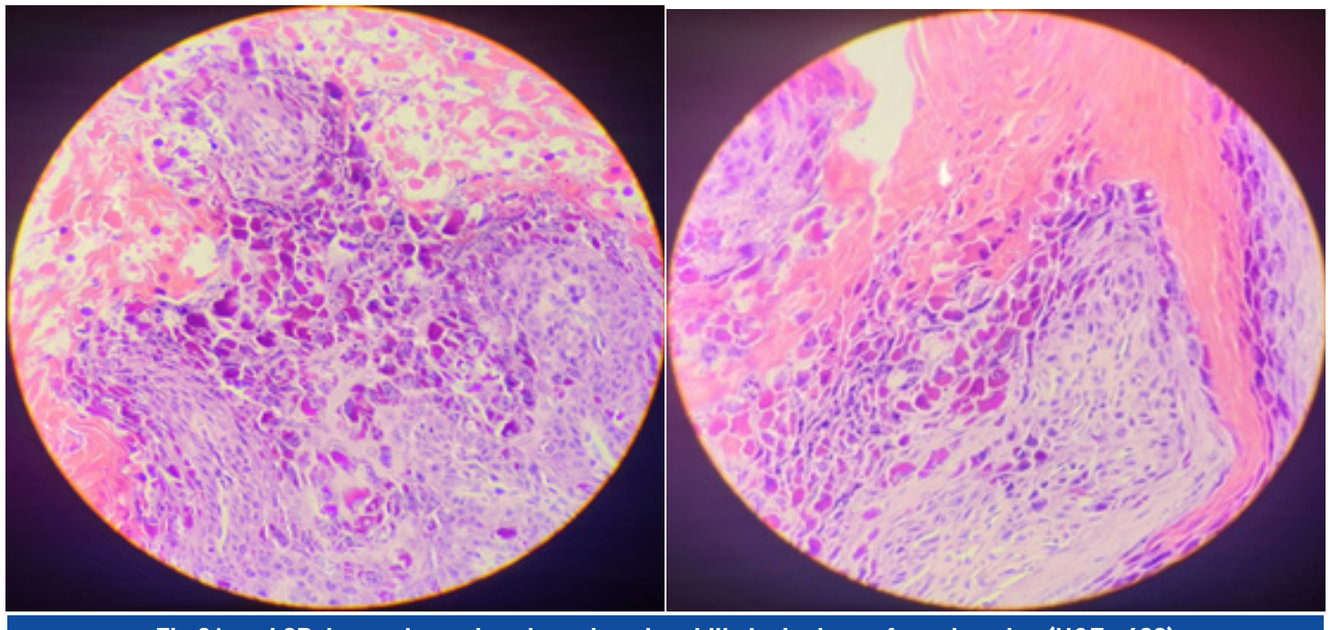

Fig 2A and 2B: Large, irregular shaped eosinophilic inclusions of varying size (H&E ×400)

Discussion

Deep palmoplantar Myrmecia warts are relatively rare variants of verrucae vulgares exhibiting endophytic growth pattern. Because of this deep endophytic or downgrowth pattern, they are termed "anthill" in contrast to their superficial counterpart i.e. verruca vulgaris. They are also known as inclusion warts, distinguished by their abundant keratohyalin granules, differing from normally basophilic keratohyalin granules by being eosinophilic. These myrmecia warts occur on palms and soles as well as on the lateral aspects and tips of fingers and toes.[1] The diagnosis rests on identification of characteristic histological findings in a background of appropriate clinical setting.

Histologically, this lesion is characterized by predominantly endophytic growth with marked acanthosis and hyperkeratosis. Hyperkeratosis is accompanied by parakeratosis and orthokeratosis. The histopathology is similar to verruca vulgaris although surface papillomatosis is not prominent.[1,4] The distinct cytological features consist of multiple eosinophilic intracytoplasmic inclusions of varying size appearing first at the level of the second or third suprabasal cell layer and progressively increasing in size, until they push the nucleus at the periphery. The

inclusion-laden keratinocytes are distributed irregularly among normal keratinocytes, thus disturbing the normal epidermal architecture and are more prominent in horny layer where they join with the parakeratotic layer. There is no stratum granulosum in-between.[5] The virus particle can be demonstrated in the nuclei of these cells by electron microscope. The viral genotyping can be confirmed by PCR based assay.

These lesions tend to recur after removal and due to high viral load, these are more infectious than other forms of wart.[5]

Fig 3: patient myrmecia site at 1 year post excision.

Conclusion

Myrmecia is diagnosed by its characteristic histological findings. Our case report is unique and rare one with no myrmecia case reported at distal interphalangeal joint till date and presence of thin granular layer which is uncommon.[6]

Consent

Consent form was signed by the patient for this case report.

References

1. Elder DE, Elenitsas R, Murphy GF, Rosenbach M, Rubin AI, Seykora JT, et al. Lever's dermatopathology: Histopathology of the skin. Philadelphia: Wolters Kluwer; 2023.
2. Moody, Cary A., and Laimonis A. Laimins. "Human Papillomavirus Oncoproteins: Pathways to Transformation." Nature Reviews Cancer, vol. 10, no. 8, 1 July 2010, pp. 550-560.
DOI: 10.1038/nrc2886
PMID: 20592731
3. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention [Internet]. Centers for Disease Control and Prevention. U.S. Department of Health & Human Services
4. Barnhill RL, A. Neil Crowson, Magro CM, Piepkorn MW. Dermatopathology, Fourth Edition. McGraw Hill Professional; 2019.
5. Laurent R, Kienzler JL, Croissant O, Orth G. Two anatomoclinical types of warts with plantar localization: Specific cytopathogenic effects of papillomavirus. Archives of Dermatological Research. 1982;274(1-2):101-11.
DOI: 10.1007/BF00510364
PMID: 6299203
6. PubMed [Internet]. U.S. National Library of Medicine; [cited 2024 Feb 27].