Extensive Mucocutaneous Verruca Vulgaris in a Non-immunocompromised Patient

Arya S Nalin\(^1\), Suja George\(^2\), Jiss Mary\(^1\), Renju M Kunjumon\(^1\), Giju Baby George\(^3\)

\(^1\)Postgraduate Student, Department of Oral Medicine and Radiology, Mar Baselios Dental College, Kothamangalam, Kerala, India, \(^2\)Postgraduate Student, Department of Oral and Maxillofacial Pathology, Mar Baselios Dental College, Kothamangalam, Kerala, India, \(^3\)Professor, Department of Oral Medicine and Radiology, Mar Baselios Dental College, Kothamangalam, Kerala, India

ABSTRACT

Verruca vulgaris (common warts) is a benign lesion of skin and mucous membranes caused by human papilloma virus. The lesions may vary in size and number and are usually self-limiting. A case of verruca vulgaris of the lip that occurred in a 10-year-old female with a discussion of etiopathogenesis and the treatment methods. Verruca vulgaris must be remembered in the differential diagnosis of papillary lesions of the oral cavity and surgical treatment may provide a satisfactory outcome in these patients. These lesions usually presents as flesh-colored, nodule or papule which is firm in consistency flesh-colored, nodule or papule which is firm in consistency and is due to infection of epidermal cells.

Keywords: Human papilloma virus, Lips, Papillomatosis, Verruca vulgaris, Viral papillomatosis

INTRODUCTION

Human papilloma virus (HPV) is the most common infectious agent that causes a relatively uncommon oral lesion verruca vulgaris.\(^1\) It's a benign epithelial hyperplasia recognized thousands of years ago and viral etiology was identified in 1907 with infrequent malignant transformation.\(^2\) It affects 7-10% of general population with peak incidence between 12 and 16 years. Usually, verruca won't cause any symptoms other than mild discomfort and occasional itching. It is sightedness for vision also. Usually, it occur in wet areas of body which may spread by direct or indirect contact to secondary sites via autoinoculation.\(^3\) Verruca vulgaris lesion remain stable for several years because immune response elicited by the viral agent is not strong enough and show spontaneous regression within 3 months and 2 years approximately.\(^4\) However, some lesion may rapidly grow in size and number and become resistant to treatment overtime.\(^5\) HPV is a double stranded DNA virus which cause both common skin warts and genital warts otherwise called condyloma accuminatum. Presently, more than 120 genotypes have been identified via DNA studies and type specific antibodies and all of which classified under low risk and high risk HPV types.\(^6\) Verruca vulgaris (common warts), the hands and feet are caused by HPV types 1, 2, 4, 27, 40, and 57.

Types 6 and 11 are implicated in the etiology of anogenital warts, and types 16, 18, 31, 35, and 45 are associated with cervix carcinoma.\(^7\) Oral warts is a collective terminology which include focal epithelial hyperplasia (Heck’s disease), oral squamous papilloma, oral verruca vulgaris (common wart), and oral condyloma accuminatum. Most of the reported cases in oral cavity present in tongue and oral condyloma accuminatum is caused by HPV 6, 11, and 12.\(^8\) Oral condyloma accuminatum is sexually transmitted disease which has strong association with orogential sexual behavior.\(^9\)

Even though different treatment modalities are there for verruca vulgaris, none is proven universally effective. Some topical agents like salicylic acid have superficial moderate effectiveness and thus even without doctors’ prescription public makes use of it. Since it is difficult to assess the depth of lesion and dermal condition it may affect healing and corrosive tissue damage can happen.\(^6\) Conventional surgical excision is the most common practiced method of treatment with about 65-85% success rate but a major disadvantage of this method being scarring in the case of foot and face lesion.\(^10\) Since it’s an infectious viral disease immunocompromised patients are more prone for the lesion.

Following is a case report of verruca vulgaris in a healthy individual.
CASE REPORT

The 10-year-old girl reported to the Department of Oral Medicine and Radiology with the chief complaint of multiple swellings in different parts of the body (Figure 1). The initial symptoms noted 2 years ago. Lesions were asymptomatic then except for mild itching at times. Lesion had a familial occurrence in a way that it had occurred in her siblings and those lesions resolved without any treatment. Past medical history was non-contributory. The patient had neither the history of serious or significant illness nor history of any medication. On extra oral examination, well-defined whitish-brown colored papules of size ranging from 2 mm to 4 mm with superficial keratosis were seen on hand, and lateral to the chin. On the left hand it was found in the little finger and on the right hand it was on the fourth finger on the dorsal aspect (Figure 2). Furthermore, it was seen lateral to chin 1 cm inferior to corner of mouth. On intraoral examination white raised fingerlike projections were seen on the lower right labial mucosa anterior to corner of mouth (2 in number) (Figure 3). They were firm, rough, and non-tender on palpation. The patient maintained good oral hygiene otherwise. The systemic review of the patient was non-contributory. A provisional diagnosis of verruca vulgaris was made. The patient underwent a complete blood investigation including interferons level which were within normal range. Excisional biopsy was performed with patient’s parents’ consent from lower right labial mucosa. Histopathological examination revealed hyperplastic orthokeratinized stratified squamous epithelium in association with fibro vascular connective tissue. The epithelium is proliferating in finger like pattern with associated thin strands of connective tissue papillae. Epithelial cells exhibit numerous koilocytes and basilar hyperplasia. With this typical histopathologic picture, we confirmed the diagnosis of verrucous hyperplasia (Figure 4).

A thorough oral prophylaxis was done.

Figure 1: Extra oral examination

Figure 2: Lesion on ventral surface of fingers

Figure 3: Lesion on lips

Figure 4: Histopathologic section
DISCUSSION

Even though a wide variety of papillary lesions occurs in the oral cavity that has the close clinical resemblance, they can be differentiated based on histopathological examination. Verruca vulgaris, condyloma acuminatum, Heck’s disease, and squamous papilloma are raised papillary lesions share similar clinical feature but differ in histopathology. Most common verruca vulgaris occur in children and seems to regress spontaneously. Papilloma virus type 11 and 13 are the most common viral genotype isolates from cutaneous warts same from verruca vulgaris lesions on the lip and the mucous membrane. Condyloma acuminatum cases were the more frequent found in young adults and most common site is the mucous membrane of anogenital region. It can occur in oral cavity due to orogenital sexual transmission which seems to be bigger in size and due to less keratinization it appears pink to red. The case discussed here represents typical oral verruca vulgaris with multiple skin involvement. Usually, such type of combination involvement seen in immunocompromised patients. Thus, above discussed case is unique in a way that similar clinical features of verruca vulgaris was noted in a patient with no underlying immune suppression. From clinical findings here, lesions are mainly located in labial mucosa which may be due to autoinoculation from lesions located on hand. Kirchner has emphasized that some lesions found in pre-pubertal age groups and that too may be due to a genetic defect that affect defense mechanism until puberty causing a much more predilection for children than others. Usually, verruca vulgaris does not need a treatment but it can be done for cosmetic reasons and prevent further spread. Most patients develop immune mechanism that cause it to regress over a period of time by themselves. In this case also patient’s sibling’s lesion resolved without treatment, her parents denied treatment initially. Effective treatment modalities of verruca vulgaris include liquid nitrogen, cryotherapy, conservative surgical excision or curettage or topical application of keratolytic agents containing salicylic acid and lactic acid. Surgical methods of treatment can be via laser, cryotherapy, or electro surgery. Recurrence is reported in some cases. No malignant transformation reported with verruca vulgaris lesions. Most of the lesions regress spontaneously with or without treatment especially in children. Genetic studies has been conducted to exclude the possibility of genetic etiology in all suspected cases.

CONCLUSION

Since reported cases of verruca vulgaris limited, information about malignant potential is less. Even though skin involvement found in above cases no underlying disease process noted as an etiology (AIDS/dysplasia on histopathology). We cannot conclude with a single case that it may occur in non-immunocompromised patients and have no malignant potential. So, more extensive studies are demanded to find out etiology with regards to immunosuppression. When extensive verruca vulgaris combined with skin lesions, they must be eyed with suspicion of AIDS/compromised immune system or internal malignancy and thorough blood investigation including ELISA/immunohistochemistry in situ hybridization/southern blot hybridization should be carried out. However, here in this case our patient is free of any immunocompromised condition. The association of oral lesion with HPV should be extensively examined to clarify the pathogenesis of HPV infection in oral cavity.

REFERENCES

13. Adler-Storthz K, Newland JR, Tessin BA, Yeudall WA, Shillitoe EJ.


Source of Support: Nil. Conflict of Interest: None declared.