Fingertip soft tissue defect caused by periungual warts: a case report

Xiaoqin Wang[1], Jinhui Xu[1], Yourang Jiang[1], and Deli Zhang[1]

[1]Chongqing City Hospital of Traditional Chinese Medicine

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ASTRACT

Periungual warts are a common problem in dermatology. We present a 69-year-old man with hand warts. The fingertip of the right thumb showed soft tissue defect with warts extending to the finger stump. We applied Superficial X Ray Therapy combined with Tretinoin to treat our patient. The warts were completely removed 26 days after treatment completion. Fingertip soft tissue defect caused by periungual warts have rarely been seen in clinic and this is the first clinical report concerning about this situation, which was successfully treated.

Keywords : Periungual warts; Soft tissue defect; Superficial X Ray therapy; case report

INTRODUCTION

Periungual warts grow in the periungual or nail margin, damaging the nail bed and inhibiting nail growth[1]. Asymptomatic infection of HPV happens constantly, lesions appear as smooth, flat or slightly elevated papules, usually skin colored or may be pigmented. Most Lesions were controlled or cleared by cellular and humoral immune responses[2]. Thus, tissue erosion caused by warts has been rarely observed. Here, we first report a case of fingertip damage caused by periungual warts.

CASE PRESENTATION

In September 2021, a 69-year-old man was admitted into our department with hand warts (Figure 1). Diagnosis was performed by clinical observation. The fingertip of the right thumb showed soft tissue defect with warts extending to the finger stump. The patient reported that this finger was normal prior to wart occurrence. The thumb of the left hand also presented periungual warts, which caused nail damage. The patient reported the existence of pimples in this finger for more than 10 years, and which started to worsen during the past 4 years. The patient further reported that he had not performed any previous treatment and family history, due to his function as a caregiver to a colon colostomy patient, which made him manage the excrement from the fistula. The patient reported no physical discomfort except itching. However, such lesions had a psychological impact, as the patient reported to feel shame in showing his hands and was afraid that he could infect others. The patient reported no additional diseases.

Our previous study showed that Superficial X-Ray Therapy (SXRT. SRT-100, Sensus Healthcare, Boca Raton, Florida) combined with Tretinoin is effective for periungual warts[3]. Therefore, we made the decision to use SXRT combined with Tretinoin to treat our patient. We administered a 5 Gy fraction per week, up to a total dose of 20 Gy. Tretinoin cream (Med-Xine Pharmaceutical Co. LTD, Sichuan, China) was evenly smeared and the lesion was subsequently wrapped with saran for 8 hours a day during 20 days from the first fraction of radiotherapy. The compliance of patient was good. The warts began to shed after three fractions

and were completely removed 26 days after treatment completion (Figures 2,3). The patient showed mild pruritus. No recurrence was observed after one year follow-up.

DISCUSSION

Standard therapy methods for periungual warts include cryotherapy, laser, surgery, interferon, or local drug therapy, which causes severe pain, scar ulcers, and irreversible destruction of the nail matrix, leading to nail deformation[4, 5]. SXRT is effective at treating periungual warts, and is associated with mild side effects, such as pruritus, hyperpigmentation, erythema, pain and swelling[3]. Therefore, we made the decision to use SXRT to treat our patient.

Radiotherapy treatment for warts might range from 1200r to 3000r (1r corresponds to, roughly, 0.876 cGy) total dose, which may be administered at once, or divided into four fractions[3, 6]. Our previous study showed that SXRT combined with Tretinoin is effective for periungual warts[3]. Given that side effects, such as radiation ulcer, are more likely to occur when higher dosage is used, we administered a 5 Gy fraction per week, up to a total dose of 20 Gy. The warts began to shed after three fractions and were completely removed 26 days after treatment completion (Figures 2 and 3). The patient showed mild pruritus. No recurrence was observed after one year follow-up.

Warts are caused by human papilloma viruses (HPVs). Cellular replication induced by viral DNA amplification leads to the formation of hyper keratinized papules that form the wart.[7] Therefore, tissue defects caused by warts are highly unlikely to occur. In the reported case, a lesion of roughly 4mm was observed, which is a rare occurrence. Such lesion might result from the lack of treatment for a prolonged period of time. Furthermore, the exposure to alkaline intestinal fluid might have enhanced the damages to the soft tissue during this period.

To the best of our knowledge, this is the first clinical report concerning a fingertip defect caused by warts, which was successfully treated, imposing only mild side effects. SXRT combined with Tretinoin is recommended for refractory warts, when acute pain is associated with conventional treatments. Nevertheless, we acknowledge that our report might be biased, as the clinical presentation might have been somehow related to the contact of the affected areas with alkaline intestinal fluid.

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