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Case Report

Dermoscopic assessment of periungual and genital warts treated by multiple modalities: a report

Balachandra S. Ankad*, Varsha R. Koti

Department of Dermatology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India

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***Correspondence:**
Dr. Balachandra S. Ankad,
E-mail: drbsankad@gmail.com

ABSTRACT

Periungual and genital warts pose a therapeutic challenge to the treating clinician as there is lack of single curative treatment modality. All existing therapeutic options are associated with high rate of recurrence when employed alone. Here authors reported complete cure of periungual and genital warts that were treated by multiple approach consisting of mumps-measles-rubella vaccine, radiofrequency ablation and oral acitretin. Therapeutic response was assessed by dermoscopy which revealed specific patterns before and after treatment. There was no recurrence of lesions even after 1 year of follow-up period.

Keywords: Dermoscopy, Warts, Treatment, Multiple modalities

INTRODUCTION

Verruca vulgaris (viral wart) is caused by human papilloma virus (HPV), a double stranded DNA virus. Periungual warts are typically caused by type 1, 2, 4, 27 and 57 HPV. It is usually transmitted by close physical contact and autoinoculation.[1] Genital warts (*Condyloma acuminata*) sexually transmitted caused by most prevalent HPV types 6 and 11. Occasionally, they may be associated with malignant types 16, 18, 31 and 33.[2]

Periungual warts are aggressive and destructive. At few times, various treatment modalities are ineffective with subsequent scarring due to damage to nail matrix and permanent nail changes like dystrophy.[1] In contrast, genital warts carry high psychosocial burden due to associated local complications such as disfigurement and risk of malignant transformation in advanced stage thus having a devastating treatment outcome.[2] Thus, HPV lesions are difficult to eradicate and are associated with high recurrence rate. The current treatment modalities are centered upon removal of the warts rather than elimination of the underlying virus. Thus, a wide array of therapies is presently in use with variable treatment outcomes. Due to the lack of an ideal treatment strategy, the treatment of periungual and genital wart is a therapeutic challenge.[3-5] In this report, we described the dermoscopic assessment of the resistant warts affecting periungual and genital region treated by multiple approaches.

CASE REPORT

Case 1

A 35 year old male patient presented with hyperkeratotic verrucous plaque involving periungual area of nail unit of right index finger for 2 years. He was treated with multiple topical therapies earlier with minimal improvement. The lesion was asymptomatic. Patient gave history of nail biting. No history of similar lesions elsewhere over the body or in other family members. Examination revealed hyperkeratotic plaque in the subungual area extending to periungual region (Figure

1A). There was partial destruction nail plate and onycholysis. Dermoscopy showed dotted and short linear vessels and whitish-grey structureless area (Figure 1B). Few adherent fabric fibres also noted. After treatment, warty lesions disappeared clinically and dermoscopically there was evidence of absence of vascular structures and reappearance of dermatoglyphics (Figure 1 C and D).

Case 2

A 25 year old male patient presented with verrucous growth over glans penis for 1 year. He received multiple topical therapies earlier with minimal improvement. The lesions were asymptomatic without difficulty in micturition. On examination, hyperkeratotic verrucous papules coalescing to form plaques involving the entire circumference of prepuce and on the glans penis was noted (Figure 2A). Dermoscopy showed mosaic pattern with dotted and glomerular vessels and finger-like projections with short linear vessels and yellowish-brown areas (Figure 2 B and C). Knob-like structures and hairpin-like vessels and keratotic scales were noted in few areas (Figure 2D). Post treatment evaluation revealed complete resolution of lesion and few brown and white areas without individual vascular structures were found in dermoscopy (Figure 3 A and B).

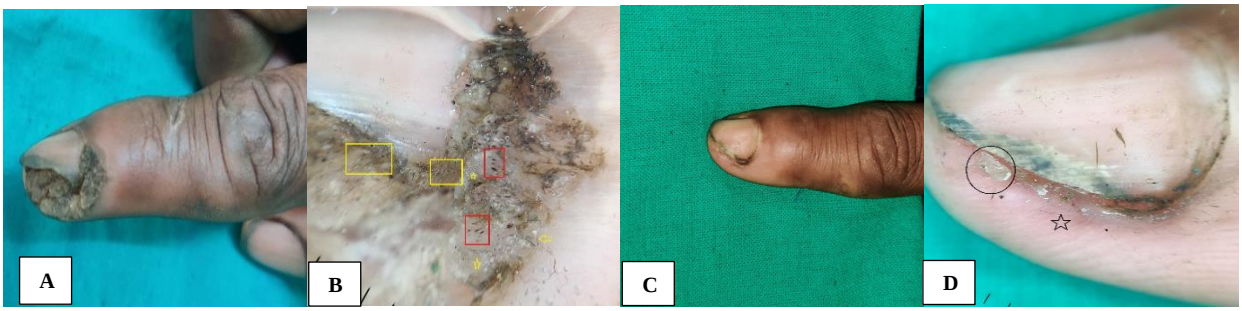

Figure 1 (A-D): Clinical image of periungual wart showing hyperkeratotic plaque in the subungual area extending to periungual region; partial destruction nail plate and onycholysis is also observed; dermoscopy of revealed thrombosed vessels as dotted (yellow box) and short linear (red box) vessels; whitish grey structureless area (yellow stars) indicating acanthosis was seen; also note adherent fabric sign (yellow arrows); clinical image of periungual wart post treatment; dermoscopy revealed the absence of vascular structures and few scales (circle) with and appearance of dermatoglyphics (star).

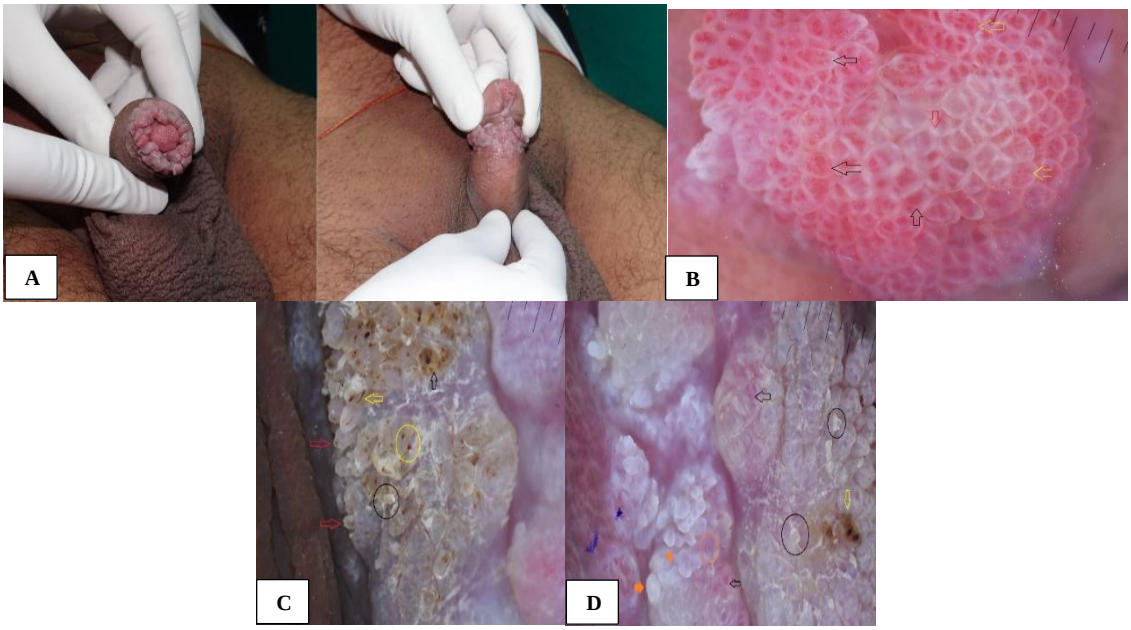

Figure 2 (A-D): Clinical image of genital wart showing hyperkeratotic growth; dermoscopy of genital wart shows mosaic pattern with dotted (yellow arrows) and glomerular (black arrows) vessels with white linear structures (red arrow); dermoscopy of genital wart shows figure-like pattern with dotted (yellow circle) and short linear (yellow arrow) vessels with finger-like projections (red arrows); white keratotic areas (black circle) and yellowish-brown areas (dried serum/blood) (black arrow) were noted; dermoscopy of genital wart showed knob-like strucutres (orange arrows), hairpin-like (orange circle) and glomerular (black arrows) vessels with yellowish-brown areas (dried serum/blood) (yellow arrow); white keratotic areas (black circles) were well appreciated.

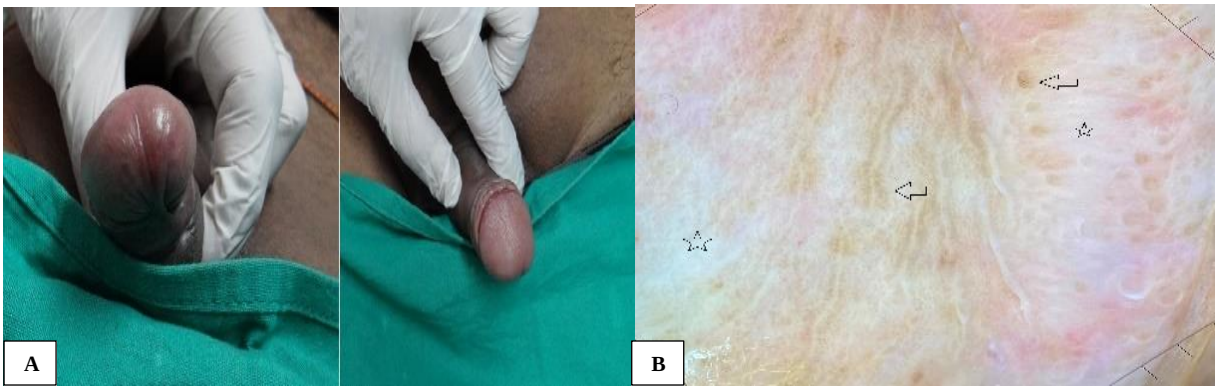

Figure 3 (A and B): Clinical image of genital wart after treatment showing normal mucosa; dermoscopic image of genital wart after treatment showing few brown (arrows) and white (stars) areas; note the absence of vascular elements except for slight pinkish hue.

Treatment protocol

Both the patients were treated with mumps-measles-rubella (MMR) vaccine followed by radiofrequency ablation (RFA) in the same session. MMR vaccine was repeated every fortnight for 2 months. RF was not repeated. Oral acitretin in a dose of 25 mg per day was also prescribed. No topical treatments were advised. After 3 months of acitretin, there was complete resolution of the lesion. Post-treatment dermoscopy revealed absence of vascular elements. There was no recurrence in 12 months follow up period.

DISCUSSION

Warts pose therapeutic challenge to dermatologists because of its poor accessibility, recalcitrance, the possibility of cosmetic disfigurement of the nail (periungual warts), malignant transformation (genital warts) and a high recurrence rate.[1] No single treatment had been established as completely curative, armamentarium of treatments were available which includes topical cidofovir, topical imiquimod, topical podophyllin alone, oral cimetidine, intralesional bleomycin, cryotherapy, electrocoagulation, carbon dioxide or pulsed dye laser therapy and photodynamic therapy.[6]

The choice of treatment method depended on the patient's age, the number and severity of lesions, the availability of treatment, the preference of the patient and treatments may need to be combined. In this report, patients were treated with multi-modal approach which included MMR vaccine, RFA and oral acitretin. MMR vaccination induced a localized cell mediated and HPV-specific response that targeted the injected wart as well as distant warts.[5] Both patients complained of pain following the injection. RFA is commonly used destructive therapy in removal of warts; it involved the principle of tissue destruction with various waveforms of electric current.[4] Care should be taken as it can cause scarring of the nail matrix, hypopigmentation or depigmentation. Retinoids disrupted the epidermal growth and differentiation thus affecting growth of warts. They were also potent immunomodulators and can down regulate HPV transcription in affected cells.[3]

Dermoscopy was used to evaluate patterns. It demonstrated different vascular structures depending on the clinical morphology of lesion. Before treatment, hairpin-like, glomerular and short linear vessels were found in genital and periungual wart respectively. Dotted vessels, white scales and white areas were noted in both. Mosaic, finger-like and knob-like patterns were exclusive for genital wart. These findings were similar to previous report.[7] However, dermoscopic assessment of treatment response in wart was not described in literature. In this study, it revealed disappearance of vascular structures in both lesions; with appearance of dermatoglyphics in periungual wart. Thus, disappearance of vascular elements was indicative of complete resolution of a given lesion of wart. This observation was useful in the treatment of wart by various modalities.

CONCLUSION

Various combinations of therapies have been used in the past to increase the curative rate and to reduce the relapse rate. Here is one such example, with the combination of MMR vaccine, RFA and oral acitretin in the treatment of periungual and genital warts. This combination therapy is not described in the literature. Thus, it opens an opportunity for research to confirm the findings in large clinical trials.

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