

A novel therapeutic approach to plane warts: A report on two cases

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Abstract

Warts are benign epithelial proliferations of the skin and mucosa caused by infection with human papilloma viruses (HPV). Plane warts are mainly caused by HPV-3 and HPV-10. There is no single treatment that is absolutely effective, and different types of treatment may be combined. One must take into account the possibility of spontaneous regression, and so the therapeutic approach should not be too aggressive. Two case reports are presented of two immunocompetent patients with multiple plane warts successfully treated with low-dose systemic isotretinoin.

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Introduction

Warts are benign epithelial proliferations of the skin and mucosa caused by infection with human papilloma viruses (HPV). Although many treatment modalities are available, treatment can be difficult.

Case report

A 40-year-old Caucasian man presented to our outpatient department with a history of multiple skin-colored plane papules on his face lasting around 1 year. He was otherwise in good health as determined by medical history, physical examination, and routine laboratory tests. On examination, there were numerous plane warts present on his beard area (Fig. 1). A diagnosis of plane warts was made clinically. The skin lesions were refractory to conventional therapies, including cryotherapy, electrocauterization, and topical retinoids. Because of the recalcitrant nature of the skin lesions, their high number, and the psychosocial burden, we decided to try treatment with systemic isotretinoin (20 mg daily, ca. 0.3 mg/kg/day). The skin lesions showed total clearance after 1 month and isotretinoin therapy was stopped. There was no relapse at a 6-month follow-up (Fig. 2).

A 21-year-old Caucasian woman presented to our outpatient department with a history of multiple skin-colored plane papules on her face lasting for 2 years. She was otherwise in good health as determined by medical history, physical examination, and routine laboratory tests. On examination, there were numerous plane warts present on her lateral cheeks and chin (Fig. 3). A diagnosis of plane warts was made clinically. Because of the high number of plane warts we decided to try systemic isotretinoin (20 mg daily, ca. 0.4 mg/kg/day). The plane warts showed total clearance after 1 month. There was no relapse at a 12-month follow-up (Fig. 4).

Discussion

There are more than 150 different HPV types that are classified in genera α (alpha), β (beta), γ (gamma), μ (mu), and ν (nu)-papillomavirus (1). Epidemiology studies suggest that warts are present in ca. 5 to 20% of children and in ca. 3 to 5% of adults (2–5). Plane warts present as smooth, flat, or slightly elevated and are skin-



Figure 1 | Numerous plane warts on beard area before isotretinoin treatment.



Figure 2 | Skin lesions showed total clearance after 1 month isotretinoin treatment.

colored or grayish-yellow but may be pigmented. They are round or polygonal in shape and vary in size from 1 to 5 mm or more in diameter. The face, backs of the hands, and shins are the sites of predilection. The number ranges from two or three to hundreds. Plane warts are mainly caused by HPV-3 and HPV-10 (6). Diagnosis is usually based on clinical examination. There is no single treatment that is absolutely effective and different types of treatment may be combined.

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Figure 3 | Numerous plane warts on lateral cheeks before treatment.



Figure 4 | Total clearance of plane warts after 1 month treatment with isotretinoin.

One must take into account the possibility of spontaneous regression, and so the therapeutic approach should not be too aggressive. Retinoids affect cellular growth, differentiation, and morphogenesis, inhibit tumor promotion and malignant cell growth, exert immunomodulatory actions, and alter cellular cohesiveness (6). An inverse relationship was observed between concentrations of retinoids and HPV deoxyribonucleic acid within infected epithelial cells, suggesting an effect on viral replication (7).

To my knowledge, one trial has been conducted involving 20 immunocompetent children with multiple and resistant warts (8). A complete response was reported in 16 children with no relapse

in 2 years. There have been few cases reported showing clinical improvement in immunocompetent and immunosuppressed patients treated for recalcitrant and/or extensive warts with systemic retinoids (9–14). Our two patients showed a complete clinical response to systemic isotretinoin therapy with no side effects.

Conclusion

In conclusion, when dealing with patients with multiple plane warts, especially in aesthetically sensitive areas recalcitrant to standard therapy, systemic isotretinoin should be considered.

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