# Imiquimod-induced vitiligo-like depigmentation

Sir,

Imiquimod, an imidazoquinoline amine, is a potent topical immune response modifier.[1] It has been used effectively to treat human papillomavirus-induced warts, molluscum contagiosum, actinic keratoses and superficial basal cell carcinoma.[2]

A 32 year-old man presented to our clinic with genital warts, which had been present for the last six months. Dermatologic examination revealed multiple verrucous papules on the shaft of the penis and pubic area and depigmented macules on the glans penis, the shaft of the penis and the scrotum [Figure 1]. Imiquimod 5% cream had been applied to the warts every other night. After two months, he had noticed erythematous lesions on the dorsal surface of the penis and the scrotum. These lesions turned into depigmented areas in three months. Depigmentation never extended to the areas that had not been treated with imiquimod. No repigmentation was noted in a six-month follow-up period. The patient had no personal or family history of vitiligo.

Imiquimod is generally a well-tolerated drug. Its most frequent side effects are erythema, flaking, scabbing, edema and excoriation. In addition, only two cases of depigmentation caused by imiquimod have been reported.[3,4] The authors speculated that imiquimod might have acted as a triggering factor in a susceptible patient who had a positive family history of vitiligo.[4] They also suggested that clinicians should be cautious when prescribing imiquimod in patients with a personal of family history of vitiligo.[4] However, our patient and the other reported case had no personal or family history of vitiligo.



**Figure 1: Multiple warts on the shaft of the penis and pubic area and depigmented macules on the glans penis, shaft of the penis and scrotum**

Imiquimod enhances antigen presentation by stimulating CD8+ T cell activation and inducing Langerhans cell maturation.[5] Vitiligo-like depigmentation may result from the destruction of melanocytes by CD8+ T cells directed to melanocyte surface antigens after antigen presentation is enhanced by imiquimod.

Dermatologists should be aware of this possible side effect of imiquimod, which may be long-lasting or irreversible.

**Engin Şenel, Deniz Seçkin**
Başkent University Faculty of Medicine, Department of Dermatology, Ankara, Turkey

**Address for correspondence:** Dr. Engin Şenel, Department of Dermatology, Başkent University Faculty of Medicine, 5. sokak No: 48 Bahcelievler, Ankara, Turkey - 06490.
E-mail: enginsenel@yahoo.com

This PDF is available for free download from a site hosted by Medknow Publications (www.medknow.com).

## REFERENCES

1. Rudy SJ. Imiquimod (Aldara): Modifying the immune response. Dermatol Nurs 2002;14:268-70.
2. Majewski S, Marczak M, Mlynarczyk B, Benninghoff B, Jablonska S. Imiquimod is a strong inhibitor of tumor cell-induced angiogenesis. Int J Dermatol 2005;44:14-9.
3. Brown T, Zirvi M, Cotsarelis G, Gelfand JM. Vitiligo-like hypopigmentation associated with imiquimod treatment of genital warts. J Am Acad Dermatol 2005;52:715-6.
4. Stefanaki C, Nicolaidou E, Hadjivassiliou M, Antoniou C, Katsambas A. Imiquimod-induced vitiligo in a patient with genital warts. J Eur Acad Dermatol Venereol 2006;20:755-6.
5. Eedy DJ. Imiquimod: A potential role in dermatology? Br J Dermatol 2002;147:1-6.