TREATMENT OF KERATOACANTHOMA WITH INTRALESIONAL METHOTREXATE

Karam Ibrahim, MD, CES (France)*
Khaled A. Bahamdan, MD, HAUTARZT**
Tallal Tallab, FRCP(C)**
Ashok K. Khare, MD*

** Consultant Dermatologist*
Division of Dermatology, Department of Medicine, Asir Central Hospital, Abha, Kingdom of Saudi Arabia
*** Assistant Professor and Consultant Dermatologist, Division of Dermatology, Department of Medicine, College of Medicine, King Saud University, Abha Branch, Abha, Kingdom of Saudi Arabia*

Abstract:

We report a case of strategically located keratoacanthoma which regressed completely in 3 weeks with minimal scar formation following methotrexate intralesionally.

Keratoacanthoma (KA), also known as molluscum sebaceum, is a rapidly evolving tumor of the skin composed of keratinizing squamous cells originating in pilosebaceous follicles and resolving spontaneously if untreated[1]. The entire process from origin to spontaneous resolution usually takes about 4 to 6 months[2]. However, KA may persist for sometime, continue to enlarge, and may become invasive and destructive before involution occurs[3]. Some degree of scarring usually accompanies spontaneous involution, occasionally with a significant cosmetic or functional deficit[3]. The most common clinical type is solitary KA which is best treated by excisional surgery. However, if the excision is incomplete, or done in the quick growing phase or before five weeks of evolution of the tumor, there is a possibility of recurrence4. Treatment other than excisional surgery is indicated in the case of large lesion (> 3cm) and/or in case of difficulty of excision[4].

Correspondence to:
Dr. Khaled A. Bahamdan
Assistant Professor, College of Medicine
King Saud University, P.O. Box 641
Abha, Kingdom of Saudi Arabia

We report a case of a strategically located KA treated by intralesional methotrexate (MTX) resulting in complete involution with minimal scar.

THE CASE

A 50-year-old Saudi female presented with 2-month history of an asymptomatic, 2 x 2 cm, skin colored well defined plaque with rolled border and central crusting involving the supralabial area below the left nasal opening (Fig. 1). The removal of crusts revealed a keratin filled crater. The surrounding skin was normal. It was not associated with intranasal involvement or cervical lymphadenopathy.

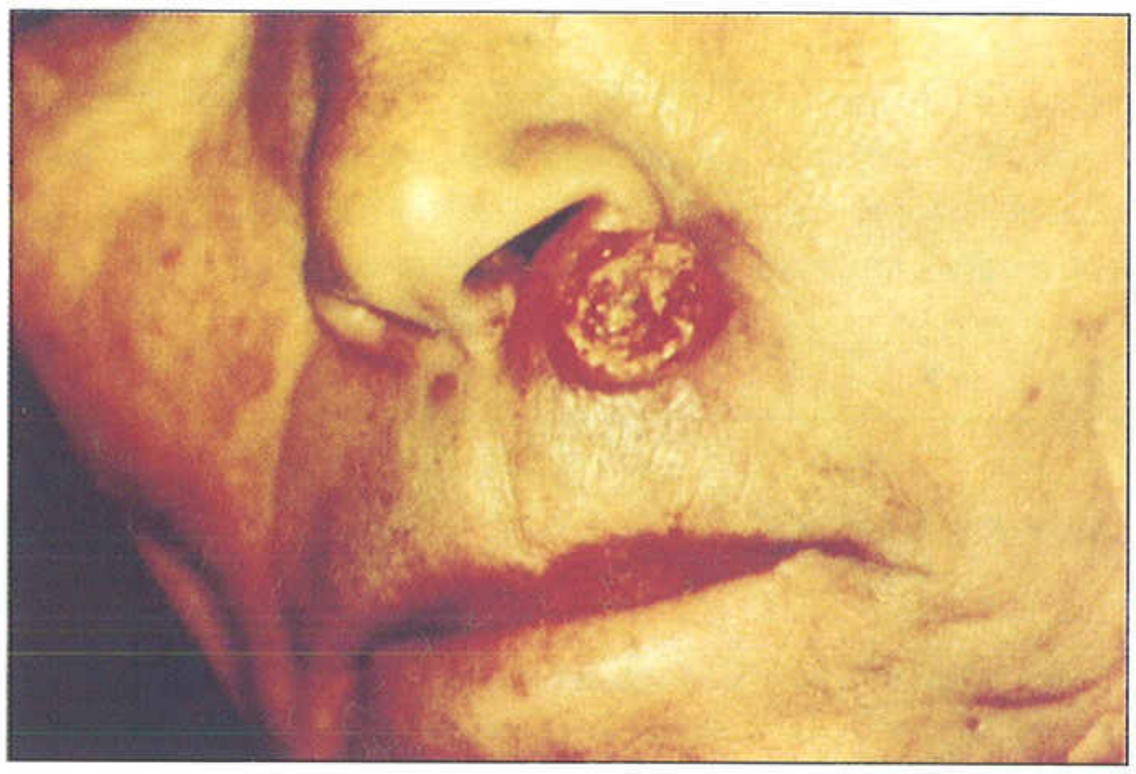

Fig. 1: Lesion of keratoacanthoma before intralesional methotrexate.

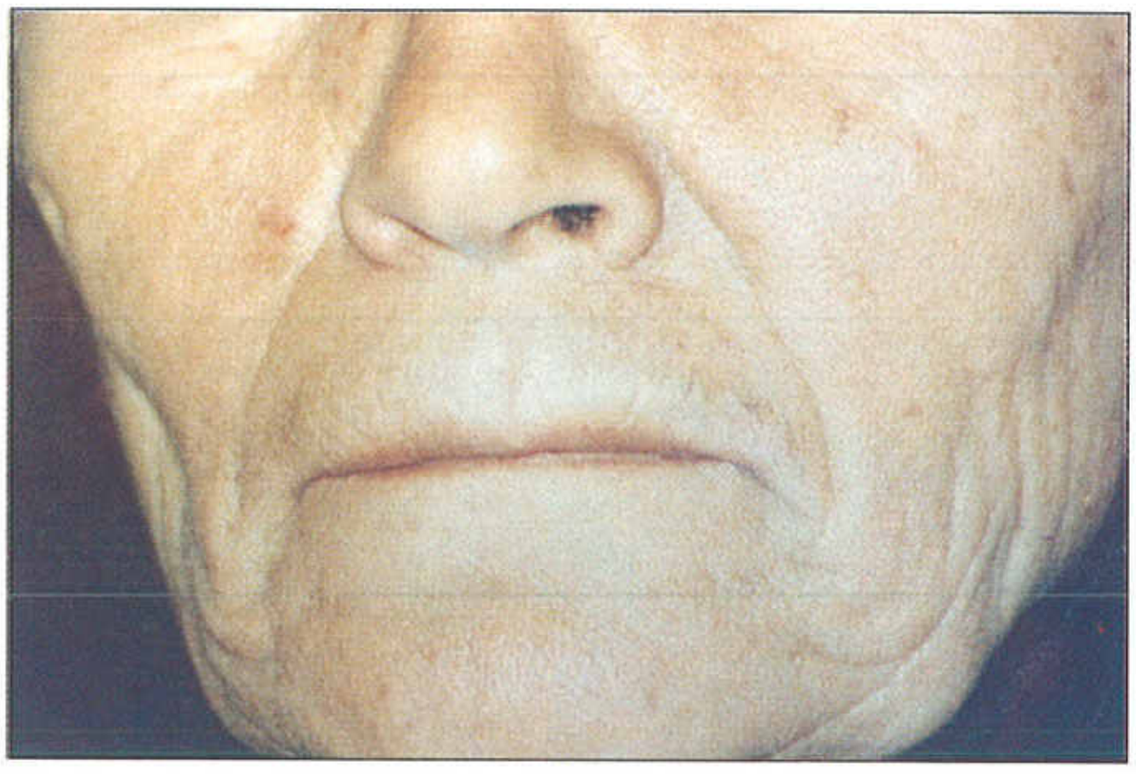

Fig. 2: After intralesional methotrexate.

The clinical diagnosis of KA was confirmed by histopathological examination. One ml of 5 mg/ml methotrexate (MTX) was injected intralesionally with an insulin syringe needle in all four quadrants. No further injections were given. Two weeks later the lesion was found to have regressed in size by approximately 80% and by 3 weeks the lesion resolved completely with minimal scar (Fig. 2). A follow-up of one year did not show any evidence of recurrence.

DISCUSSION

There is no universal satisfactory treatment for KA. The end result of leaving the tumor to regress is usually a rather unsightly scar1. Treatment provides hastened resolution or cure, prevention of rapid enlargement or impingement on important structures, and improvement in overall cosmetic result2. Many therapeutic modalities have been used like surgical excision, blunt dissection, Mohs' micrographic surgery, curettage and electrodessication, cryosurgery, laser surgery, radiotherapy, systemic retinoids, thymic hormone, transfer factor, topical podophyllin, intralesional triamcinolone, topical or intralesional (IL) 5-fluoro uracil, IL bleomycin, systemic or IL MTX and IL interferon alfa-2a[2,4].

Melton et al3 treated 9 patients of KA with IL MTX. All the lesions cleared up completely in a period ranging from 2 to 4 weeks with no recurrence in a follow-up of 3 to 35 months. The total cumulative dose of MTX ranged from 5.0-50.0mg/patient. There were excellent cosmetic results with no side effects. Our case also had excellent cosmetic result with 5mg MTX in 3 weeks time.

The most obvious mechanism by which MTX might effect involution of KAS would be via a decrease or halt in thymidylate (and subsequent DNA) synthesis by inhibition of folate and dihydrofolate reductase by MTX[3].

IL MTX is a practical and effective method of treatment for large or strategically located KA's. It can replace surgical intervention which may have more morbidity than this simple procedure.

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