Successful Treatment of Earlobe Keloids with Imiquimod after Shave Excision

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Abstract

There are various methods to treat keloid. However, the recurrence of keloidal lesions seems important in this regard. Herein, we report a case of successful treatment of earlobe keloids with imiquimod after shave excision

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Keywords: keloid, imiquimod, earlobe

Case Presentation

A 19-year-old female presented with a several-year history for bilateral earlobe keloids. The lesions were first noticed after ear piercing and had been increasing in size thereafter. (Figure 1a) She had failed to respond to multiple injections of triamcinolone and then cryotherapy.

She was treated with debulking by tangential shave excision. Immediately after the surgery, application of imiquimod 5% cream was started and continued three times a week for eight weeks. The patient did not develop any side effects at the location. At 6 and 12 months post-treatment follow-ups, there was an excellent cosmetic result with no evidence of recurrence (Figure 1b).

Discussion

Keloids are characterized by increased fibroblast activity in the setting of an altered cytokine profile. It seems that one of the key elements in the etiopathogenesis of keloids is interferon (IFN) and it has been shown that IFN production is reduced in mononuclear cells of patients with keloids.[1] Considering the aforementioned fact, in 1997, Berman and Flores successfully tried to reduce the postoperative recurrence rate of keloids with injections of IFN-α2b immediately after excision.[2]

Although keloids are benign lesions, their social and psychological impact on affected individuals should not be ignored. Conventional treatments for keloid include intralesional triamcinolone, interferon,

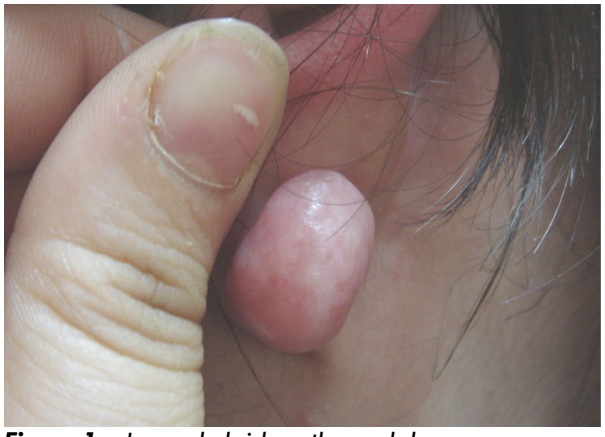

Figure 1a: *Large keloid on the earlobe.*

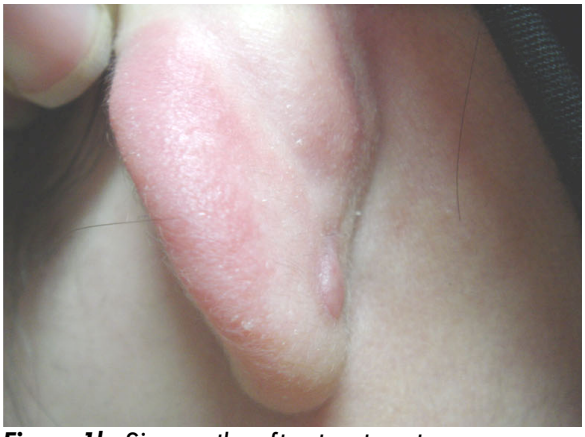

Figure 1b: *Six months after treatment.*

5-fluorouracil, silicone gel, cryotherapy and radiotherapy. All of these modalities have their own limitations. For example, silicon makes the hypertrophic scars and keloids more pliable, but it usually does not lead to complete flattening of the lesions; or as for radiotherapy, there is a theoretical concern for the development of squamous cell cancers in the area of previous radiation therapy.

In general, occurrence of keloids following ear piercing is not rare and the treatment of earlobe keloids has historically been suboptimal; characterized by discomfort, poor response, and high rates of recurrence.[3]

Imiquimod, an immunomodulating imidazoquinoline, is currently approved for the treatment of genital and perianal warts. It is capable of inducing IFN-α, as well as tumor necrosis factor-α and interleukins 1, 6, and 8.[4] A growing body of evidence suggests that imiquimod 5 percent cream is an effective and appropriate treatment for hypertrophic scars and keloids after surgery or trauma. A pilot non-randomized comparative study done by Berman and Kaufman[5] on 12 patients with stable keloids revealed a 0% intention to treat recurrence rate at 24 weeks after postoperative application of 5% imiquimod cream for 8 weeks. Certainly, the recurrence rate after preventive imiquimod therapy would be variable for different parts of the body. It is lower for those areas with less tension such as pinna. In a non-randomized open-label pilot study,[6] eight earlobe keloids were treated with imiquimod 5% cream after parallel keloid removal. Six (75%) remained recurrence free. Four patients out of them underwent bilateral comparison with intralesional steroid injections. Two patients in the imiquimod group vs. all patients in the steroid group had recurrence. In a recent study, the highest recurrent rate occurred at the chest wall and neck (83.3%) and pinna had the lowest rate of recurrence (2.9%) after keloid excision and postoperative imiquimod application.[7]

It is reported that imiquimod can alter the expression of two major markers of apoptosis in keloids, but their exact role is yet to be determined.[8]

One main drawback for imiquimod is that it can be irritating in some patients, causing redness, scaling and pruritis. Another hurdle is some reports of wound dehiscence induction by early imiquimod treatment in larger surgical sites and also wounds closed with tension or grafts.[5, 9]

There is still little evidence to support this drug as first or second line therapy of keloids.[10]

Taken together, postoperative imiquimod seems to be a safe and effective way in the prevention of recurrence after shave excision of earlobe keloids, although randomized trials should be performed to provide required evidence for this hypothesis.

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