

Isotretinoin-Induced Skin Fragility in a Teenaged Athlete: A Case Report

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Practice Points

- Dermatologists should counsel patients taking isotretinoin to avoid facial cosmetic procedures such as dermabrasion, laser treatments, waxing, or chemical peels during treatment and at least 6 months afterward.
- Abnormal wound healing, epidermal stripping, and keloidal scarring are some of the reported consequences of undergoing facial cosmetic procedures during or after treatment with isotretinoin.
- Patients with repetitive facial trauma, such as athletes in contact sports, also should be counseled about potential skin fragility during or after treatment with isotretinoin.

Isotretinoin is approved by the US Food and Drug Administration for the treatment of severe recalcitrant nodular acne. Mucocutaneous toxicity is the most commonly observed side effect of isotretinoin use. Because atrophy and skin fragility may occur while taking isotretinoin, most warnings recommend avoidance of cosmetic procedures, such as dermabrasion, laser treatments, waxing, and chemical peels. We report a case of isotretinoin-induced skin fragility in a 16-year-old adolescent boy who presented with an unusual amount of skin erosions and excoriations on his face during wrestling season. We propose that it may be prudent to advise athletes who are involved in contact sports that skin fragility and increased erosions may occur during or after their course of treatment with isotretinoin.

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Isotretinoin is a first-generation oral retinoid that was first synthesized in 1955 and gained US Food and Drug Administration approval for the treatment of severe recalcitrant nodular acne in 1982. Isotretinoin is unique in its ability to

induce remission in patients with severe recalcitrant nodulocystic acne. The usual regimen includes daily treatment at low doses of 0.5 to 2 mg/kg for approximately 6 months, with a total cumulative dose of 120 to 150 mg/kg. Mucocutaneous toxicity is the most commonly observed side effect of isotretinoin use but generally is mild and dose dependent; patients do not stop therapy secondary to mucocutaneous toxicity. Atrophy and skin fragility also can occur from isotretinoin therapy, which typically is associated with warnings to avoid cosmetic procedures (eg, dermabrasion, laser treatments, waxing, chemical peels.)¹ We report a case of isotretinoin-induced skin fragility in a 16-year-old adolescent boy who presented with an unusual amount of skin erosions and excoriations on his face during wrestling season.

Case Report

A 16-year-old adolescent boy presented with moderate to severe nodulocystic acne and was started on isotretinoin (40 mg daily) for 2 weeks; the dosage then was increased to 40 mg twice daily for the next 6 months. Prior treatment with minocycline failed and he could not take sulfa drugs because of a history of rash development. During the treatment course, the patient experienced cheilitis and xerosis, which were mild, but denied any other side effects. He reported resolution of acneform lesions after a 6-month course of isotretinoin. His medical history also was remarkable for asthma, and his current

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medications included montelukast and albuterol, as needed.

One month after completing the 6-month course of isotretinoin the patient returned to our clinic with several large erosions on the face (Figure). Three weeks prior he joined the high school wrestling team and experienced repetitive facial contact with the wrestling mat and other wrestlers. The patient had been a wrestler for several years prior to treatment with isotretinoin but previously had never experienced skin fragility; therefore, the patient attributed his increased skin fragility to his isotretinoin use.

Unfortunately, the patient sustained a shoulder injury shortly after presentation and could no longer compete as a wrestler. Without further trauma to the skin the multiple erosions healed with no residual scarring except for a mild depressed area on the mid forehead.

Comment

We believe that our patient developed increased skin fragility from isotretinoin use. Recent treatment with isotretinoin generally is considered a contraindication in patients seeking to undergo facial cosmetic procedures such as dermabrasion, laser treatments, or chemical peels.² The standard warning is to avoid facial cosmetic procedures during treatment with isotretinoin and at least 6 months after treatment, which is based on case reports demonstrating abnormal wound healing and keloidal scarring following dermabrasion and argon laser treatment.^{3,4} Additionally, there also have been multiple reports of erosions after wax depilation during isotretinoin treatment, particularly on the face.⁵⁻⁷ Women reported multiple linear erosions near the eyebrows and large areas of epidermal stripping on their legs after waxing. The erosions healed without scarring.⁵⁻⁷

Conclusion

Reports of cutaneous side effects associated with isotretinoin use have focused on the avoidance of cosmetic procedures. Based on our observation, we believe warnings of skin fragility also should be issued to teenaged athletes who are taking isotretinoin, as many young athletes will continue to be involved in contact sports both during and after their courses of treatment. Our patient was not aware of this potential cutaneous side effect prior to starting his wrestling season; fortunately, his erosions healed without scarring. We propose that it may be prudent to advise athletes who are involved in contact sports that skin fragility and increased erosions may occur during or after their course of treatment with isotretinoin.



Linear excoriations and multiple erosions on the forehead of a 16-year-old adolescent boy who was a wrestler and had completed a 6-month course of isotretinoin treatment 1 month prior to presentation (A and B).

REFERENCES

1. Ellis CN, Krach KJ. Uses and complications of isotretinoin therapy. *J Am Acad Dermatol.* 2001;45:S150-S157.
2. Abdelmalek M, Spencer J. Retinoids and wound healing. *Dermatol Surg.* 2006;32:1219-1230.
3. Rubenstein R, Roenigk HH Jr, Stegman SJ, et al. Atypical keloids after dermabrasion of patients taking isotretinoin. *J Am Acad Dermatol.* 1986;15(2, pt 1):280-285.
4. Zachariae H. Delayed wound healing and keloid formation following argon laser treatment or dermabrasion during isotretinoin treatment. *Br J Dermatol.* 1988;118:703-706.
5. Egido Romo M. Isotretinoin and wax epilation. *Br J Dermatol.* 1991;124:393.
6. Holmes SC, Thomson J. Isotretinoin and skin fragility. *Br J Dermatol.* 1995;132:165.
7. Woollons A, Price ML. Roaccutane and wax epilation: a cautionary tale. *Br J Dermatol.* 1997;137:839-840.