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# Collagenase Followed by Compression for the Treatment of Earlobe Keloids

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**BACKGROUND** Many therapeutic options are available for treating keloids, but success rates vary widely, and the keloids often recur. The Food and Drug Administration has recently approved intralesional collagenase for the treatment of Dupuytren's contracture. This medication has not been explored for the treatment of earlobe keloids, a common problem.

**OBJECTIVE** To evaluate the safety and clinical efficacy of intralesional collagenase followed by compression for the treatment of earlobe keloids.

**MATERIALS AND METHODS** Six earlobe keloids in six patients were injected with a commercial collagenase preparation. Study participants were asked to use compression earrings daily thereafter. Patients were examined and photographed 1 day, 2 weeks, 4 weeks, 10 months, and 12 months after injection. Adverse events were assessed at each visit, and the keloids were measured and photographed.

**RESULTS** All patients had a decrease in the size of their earlobe keloid by an average of 50% ( $p = .02$ ). Three of the six participants chose to have their earlobe keloids surgically excised for cosmetic reasons 6, 8, and 11 months after enrollment, so measurements for data analysis for these patients were taken after only 1, 1 and 10 months. All participants returned for follow-up at the last study visit 1 year after study commencement. The three patients who completed the study were pleased with the improvement of their earlobe keloid, although complete clearance was not achieved. Side effects included injection site swelling, tenderness, and one ulceration that spontaneously resolved within 2 weeks.

**CONCLUSION** Intralesional collagenase followed by compression appears to be a safe and modestly effective treatment for earlobe keloids. This approach warrants further investigation in larger studies with longer follow-up in motivated patients who decline surgical excision.

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*Dr. Gilcrest is editor in chief of the Journal of Investigative Dermatology.*

**K**eloids and hypertrophic scars are common problems, especially in people of African, Hispanic, and Asian descent.<sup>1</sup> Clinically, keloids extend beyond the original wound and can have a deep red or purple color. Keloids are characterized histologically by disorganized, thick, hyalinized collagen with a prominent mucoid matrix.<sup>2</sup> The pathogenesis of keloids has not been fully

elucidated, but the primary biochemical feature is an imbalance of matrix degradation and collagen biosynthesis, resulting in excess accumulation of collagen in the wound.<sup>3</sup> Oddly, levels of collagenases have been found to be three to four times as high and 14 times as active as in normal scars.<sup>4,5</sup> In addition, a defect in apoptosis and abnormal expression of many growth factors, enzymes, and interleukins

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