

[Plast Reconstr Surg.](#) 2008 Apr;121(4):1421-9.

Percutaneous collagen induction therapy: an alternative treatment for scars, wrinkles, and skin laxity.

[Aust MC](#), [Fernandes D](#), [Kolokythas P](#), [Kaplan HM](#), [Vogt PM](#).

Klinik für Plastische, Hand- und Wiederherstellungschirurgie, Medizinische Hochschule Hannover, Hannover, Germany. aust_matthias@gmx.de

Abstract

BACKGROUND: Skin laxity, rhytides, and photoaging are generally treated by ablative procedures that injure or destroy the epidermis and its basement membrane, at least in the beginning, and subsequently lead to fibrosis of the papillary dermis. The ideal treatment would be to preserve the epidermis and promote normal collagen and elastin formation in the dermis. Percutaneous collagen induction takes us closer to this ideal.

METHODS: The authors performed a retrospective analysis of 480 patients in South Africa and Germany with fine wrinkles, lax skin, scarring, and stretch marks treated with percutaneous collagen induction using the Medical Roll-CIT to produce tighter, smoother skin. Most patients had only one treatment, but some have had as many as four treatments. Patients were prepared with topical vitamin A and C cosmetic creams for a minimum of 4 weeks preoperatively.

RESULTS: On average, patients in Germany rated their improvement between 60 and 80 percent better than before the treatment. Histologic examination was carried out in 20 patients and showed a considerable increase in collagen and elastin deposition at 6 months postoperatively. The epidermis demonstrated 40 percent thickening of stratum spinosum and normal rete ridges at 1 year postoperatively.

CONCLUSIONS: Percutaneous collagen induction was started in 1997 and has proved to be a simple and fast method for safely treating wrinkles and scars. As opposed to ablative laser treatments, the epidermis remains intact and is not damaged. For this reason, the procedure can be repeated safely and is also suited to regions where laser treatments and deep peels cannot be performed.

PMID: 18349665 [PubMed - indexed for MEDLINE]