

# Keep smiling: Collagen matrix promotes gum healing around exposed roots

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Receding gums often result in tooth sensitivity and can lead to decay of the root and persistent inflammation of the gum. New research published in BioMed Central's open access journal *Head & Face Medicine* demonstrates that a novel method using bovine collagen is able to enhance gum healing. This resulted in thicker margins around the tooth and, in over half the cases, complete coverage of exposed roots.

Researchers across Germany and Switzerland led by Dr Shahram Ghanaati and the dentist Dr Markus Schlee investigated the possibility of using [collagen](#), extracted from bovine pericardium, to form a support for mending receding gums and exposed roots. The collagen was extracted by a process involving osmotic, oxidative and alkaline treatment. This ensured that the cell walls were broken down, proteins and fats dissolved, and that bacteria, viruses and other pathogens were inactivated and removed.

The study followed 14 otherwise healthy patients with over 60 'recessions' between them. Their damaged teeth were cleaned before surgery and the collagen implants held in place with loops of surgical thread around the affected tooth. Two weeks later the sutures were removed. None of the patients needed antibiotics.

The patients were re-examined after six months to see how well they had recovered. Dr Schlee described the results, "In all cases the healed-over implant improved the look and severity of the recession, and, in over half of all treatments, resulted in total coverage of the exposed root. We

would not have expected any of these patients to get better without surgery."

The collagen seems to be able to act as a scaffold for the body's own cells to repair the damage leading to results on a level comparable to that of connective tissue grafts. Bovine collagen is a possible solution for [patients](#) with little available donor tissue or for whom multiple surgeries are not an option.

**More information:** Bovine pericardium based non-cross linked collagen matrix for successful root coverage, a clinical study in human, Markus Schlee, Shahram Ghanaati, Ines Willershausen, Michael Stimmlmayr, Anton Sculean and Robert A Sader, *Head & Face Medicine* (in press)

Provided by BioMed Central

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