

Tropocollagen in the regeneration of oral soft tissues – the latest reports

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The aim of this study is the clinical observation of gingival tissue condition after tropocollagen injections in orthodontic patients treated with clear aligners (Invisalign). The porcine origin collagen type I (MD-TIS-SUE, 2 ml amp; Guna Medical Device) was injected into keratinized gingivae four times at 7–14 days intervals for mild gingival papillary recession, thin biotype of gingivae and teeth hypersensitivity associated with gingival recession. The purpose of the treatment was to prevent detrimental effect on the periodontium, especially on the patients with thin biotype and to cure periodontal complications induced by orthodontic treatment.

Teeth hypersensitivity decreased from 7 to 2 on the Visual Analogue Scale (VAS). After four sessions with tropocollagen, significant improvement was observed in gum recession, the number of gingival papilla defects and gingival thickness.

It is reasonable to conclude that tropocollagen increases the safety of oral connective tissues during the treatment of patients with clear aligners and significantly reduces teeth hypersensitivity. The injectable form of

tropocollagen is a promising material for gingival soft tissue regeneration and periodontal tissue biotype, including the thickness of gingivae and gingival papillae regeneration

Future research on tropocollagen will focus on improving the technology of its use and understanding the interaction with other factors influencing the process of soft tissue reconstruction, e.g. with platelet-rich fibrin (PRF) for I-PRF injection.

References

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