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## Improvement of gingival condition following atelocollagen injection

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**Statement of the Problem:** Periodontal disease is one of the main causes of tooth loss and the second most common oral disease after caries. The condition of the gingiva significantly affects the outcome of dental treatment. A healthy gingiva is firm, pink in color and has no visible inflammation. Gingivitis, the most visible symptom of periodontal disease, is confined to the superficial gingival tissue. Clinical signs of gingivitis include swelling, erythema and bleeding after minor trauma (tooth brushing, sometimes chewing). Bleeding on probing (BOP) is an objective symptom of inflammation, attesting bleeding simply as present or absent on tooth surface. In some patients, especially those with autoimmune diseases, bleeding occurs even in the absence of other signs of gingivitis. **Methodology & Theoretical Orientation:** The study used the collagen material, Linerase, which is a class III medical device in the form of lyophilized type I equine atelocollagen. A 0.05 ml of solution (atelocollagen thinned with 5 ml 0.9% NaCl) was injected into keratinized gingiva, two millimeters above the base of the gingival papillae, four times at two-week intervals. BOP was measured at each visit prior to injection. **Findings:** After the first injection of atelocollagen, bleeding was significantly reduced, and the BOP value gradually decreased with each injection. The greatest decrease in the number of bleeding points was observed after the first and second injection. Continuation of the injections resulted in the improvement and stabilization of clinical condition. **Conclusion & Significance:** The measurement of bleeding tendency should be a standard procedure during an oral examination to help identify the areas at risk of further destruction and to plan proper treatment. Regenerative procedures should become a regular part of treatment plans with scaling, root planning and other surgical procedures.

### Recent Publications

1. Klewin-Steinböck S, Nowak-Terpiłowska A, Adamski Z, Grocholewicz K, Wyganowska-Swiatkowska M (2021) Effect of injectable equine collagen type I on metabolic activity and apoptosis of gingival fibroblasts. *Adv Dermatol Allergo* 38:440–445.
2. Klewin-Steinböck S, Wyganowska M (2023) Reduction in Gingival Bleeding after Atelocollagen Injection in Patients with Hashimoto's Disease-A Pilot Study. *Int J Environ Res Public Health* 20(4):2954.
3. Checchi L, Montevecchi M, Checchi V, Zappulla F (2009) The relationship between bleeding on probing and subgingival deposits. An endoscopic evaluation. *Open Dent J* 3:154–160.

### Biography

Dr Klewin-Steinböck has over 20 years of clinical experience in dentistry. Graduated from Poznan University of Medical Science, she has also completed post-graduate studies in Facial Aesthetics. PhD degree obtained after defending the thesis: "Heterogeneity of gingival and palatal fibroblasts in the aspect of recession treatment". Her major interests include periodontology and the possibility of using substances used in aesthetic medicine for gingival bioregeneration and biostimulation. Currently, she is an Assistant at the Department of Dental Surgery, Periodontology and Oral Mucosa Diseases.

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