

A Comparison of the Traditional Injection and a New Anesthesia Technique (The Wand®) for Non-surgical Periodontal Therapy

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The purpose of this study was to compare conventional local anesthesia with a newly developed anesthesia technique, called anterior middle superior alveolar nerve block (AMSA) for non-surgical periodontal therapy (scaling, root planing). Twenty patients with chronic periodontitis (8 females, 12 males; mean age: 45 ± 8.5 years) with good general health received non-surgical periodontal therapy in the upper jaw under local anesthesia. The local anesthesia was performed according to a split-mouth design with either AMSA or with the conventional palatal infiltration technique. Pain response was recorded and evaluated with a standardized visual analogue scale (VAS) ranging from 0–10. The results of the present study showed a statistically significant lower level of pain ($p < 0.001$) for local anesthesia with the AMSA-technique, compared to conventional palatal anesthesia. Moreover, the AMSA-technique resulted in a complete anesthesia of the vestibular gingiva in the area delineated by the upper first incisors and first molars. Patient acceptance was significantly higher with the AMSA-technique than with conventional local anesthesia. No adverse side effects such as necrosis, swelling or wound-healing complications, which could be related to the local anesthesia, were observed.

Keywords: local anesthesia, AMSA-technique, pain perception, traditional injection, pain rating