

# Patient Evaluation of a Novel Non-Injectable Anesthetic Gel: A Multicenter Crossover Study Comparing the Gel to Infiltration Anesthesia During Scaling and Root Planing

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## Abstract

**Background:** Periodontal scaling procedures commonly require some kind of anesthesia. From the patient's perspective, the choice of anesthetic method is a trade-off between the degree of anesthesia and accepting the side effects. The present study evaluates the preferences for a novel non-injection anesthetic product (a gel, containing lidocaine 25 mg/g plus prilocaine 25 mg/g and thermosetting agents) versus injection anesthesia (lidocaine 2% adrenaline) in conjunction with scaling and/or root planing (SRP).

**Methods:** In a multicenter, crossover, randomized, open study patients were asked, after they had experienced both products, if they preferred anesthetic gel or injection anesthesia. In addition, the adequacy of anesthesia and occurrence of post-procedure problems were assessed. The patients were also asked about their willingness to return if they were offered anesthetic gel at their next visit and their maximum willingness to pay (WTP) for this option.

**Results:** One-hundred seventy (170) patients at eight centers in Belgium were included in the study. There were 157 per protocol (PP) patients. A vast majority of the PP patients (70%) preferred the anesthetic gel to injection anesthesia (22%). The most common reason was less post-procedure numbness. Eighty percent (80%) of the patients expressed satisfactory anesthesia with the gel and 96% with injection anesthesia ( $P < 0.001$ ). Post-procedure problems were significantly less with the gel than with injection ( $P < 0.001$ ): numbness 15% versus 66%, unpleasant sensations such as soreness and pain 44% versus 63%, and problems connected with daily activities 19% versus 69%. The majority of patients (60%) who preferred gel were also willing to pay for it. A conservative estimate of the median WTP was \$10.00. Furthermore, anesthetic gel would make almost every second patient (45%) more or much more willing to return for the next treatment.

**Conclusions:** The data suggest that a somewhat less profound anesthesia with gel is clearly preferred by the patients because of the low incidence of post-procedure problems as compared to conventional injection anesthesia. The median WTP is likely in excess of the acquisition cost of the product, which indicates a favorable cost-benefit ratio for the individual patient. *J Periodontol 2004;75:1471-1478.*