

Title: Evaluation of Micro-Osteoperforations in Expediting Orthodontic Tooth Movement in Adult Patients

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Abstract:

Background: Orthodontic tooth movement, the process of aligning teeth, can often be time-consuming, particularly in adult patients. Micro-osteoperforations (MOPs) have emerged as a potential technique to accelerate this process.

Materials and methods: A sample of 30 adult patients undergoing orthodontic treatment was selected. The patients were divided into two groups: an experimental group (EG) receiving MOPs and a control group (CG) without MOPs. Standard orthodontic treatment was administered to both groups. The rate of tooth movement was measured using digital models and recorded in millimeters per month. Pain levels reported by patients were also noted. The data were analyzed using basic statistical methods.

Results: The EG demonstrated a significantly higher rate of orthodontic tooth movement compared to the CG. The average rate of tooth movement in the EG was 1.5 millimeters per month, while the CG exhibited an average rate of 0.8 millimeters per month. Additionally, pain levels reported by patients in the EG were slightly elevated immediately after MOPs but subsided within a few days.

Conclusion: The findings of this study suggest that MOPs can effectively expedite orthodontic tooth movement in adult patients.

Keywords: Acceleration; adult patients; micro-osteoperforations; orthodontic tooth movement; orthodontics; pain management.

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