Effects of Ozone Therapy on the Early Healing Period of Deepithelialized Gingival Grafts: A Randomized Placebo-Controlled Clinical Trial.

Taşdemir Z¹, Alkan BA¹, Albayrak H².

Author information

Abstract

BACKGROUND:
This study evaluates the effects of ozone therapy (OT) on the early healing period of deepithelialized gingival grafts (DGG) placed for non-root coverage gingival augmentation by laser Doppler flowmetry (LDF).

METHODS:
Thirty-three patients were assigned to study groups: 1) test: DGG + OT; or 2) control group: DGG alone. Thirty patients completed the study. Ozone was applied on DGGs placed in the recipient bed and donor site immediately after surgery and at days 1 and 3 post-surgery. Blood perfusion in the recipient site was measured by LDF on the day of surgery and at 1, 2, 3, 6, 8, 10, and 13 days after surgery. Quality of life (assessed by the Oral Health Impact Profile-14) and pain at donor/recipient sites (assessed by visual analog scale) were also investigated.

RESULTS:
Increase in blood perfusion units in the test group was significantly higher than control group at 1, 2, 3, 6, and 8 days post-surgery (P <0.001). Significant differences occurred between test and control groups in terms of visual analog scale values during the first week post-surgery for both donor and recipient sites (P <0.05). The ozone-treated group showed significantly higher quality of life than control group on postoperative day 6 (P = 0.002).

CONCLUSIONS:
OT enhanced blood perfusion units in the first postoperative week. This outcome is also consistent with improvement in wound healing, accompanied by an increase in quality of life and decrease in postoperative pain in the test group.

KEYWORDS:
Autografts; pain; transplants; wound healing