

Erbium,chromium:yttriumóscandiumógalliumógarnet laser-assisted sinus graft procedure

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Abstract The possibility of using lasers in the field of dentistry has been a subject of investigation. There are few reports that any laser systems have been used for bony window osteotomy by direct sinus grafting. In this study, erbium, chromium:yttriumóscandiumógalliumógarnet (Er, Cr:YSGG) laser of various laser systems was used for 12 sinus bone grafts in ten patients, and the efficiency of the laser was evaluated according to the osteotomy time and the rate of sinus membrane perforation in the clinical results; the mechanism is described. Eight of the 12 procedures were performed by direct sinus grafting with the Er,Cr: YSGG laser without membrane perforation (perforation ratio 33.3%). Operating time for bony window osteotomy with laser alone was 267 minutes [3 min 24 s on average; 3.4 ± 1.4 min (mean \pm standard deviation)], and all the implants placed immediately were successful.

Keywords Erbium, chromium:yttriumóscandiumógalliumógarnet (Er,Cr:YSGG) laser . Membrane perforation . Sinus bone graft . Window osteotomy

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