

# **Clinical applications of autologous cryoplatelet gel for the reconstruction of the maxillary sinus. A new approach for the treatment of chronic oro-sinusal fistula.**

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## **Abstract:**

The authors report their clinical experience regarding an original method of surgical repair of oro-sinusal communications. From September 1999 to December 2003, 13 patients (7 male and 6 female patients; mean age: 52 years, range: 24-68 years) underwent surgical repair of an oro-antral fistula by means of cryoplatelet gel: in three patients, it was mixed with bioglass granules; in two, it was mixed with Bioss; in three, it was mixed with particulate bone extracted by means of a bone grafter from the oral cavity close to the operative site, with addition of demineralised bovine bone; in three, it was used together with porose hydroxyapatite, and in two patients the cryoplatelet gel was used only. No postoperative complication was reported; primary wound healing was achieved within seven to nine days. A bony orthopantoscintigraphy was performed a few months following the operative procedure, showing an active osteogenic process. In eight patients, a CT was performed after 8 to 12 months from the operation, showing a normal pneumatization with reconstruction of the floor of the maxillary sinus. Although preliminary, these findings seem to suggest that the use of bioengineered materials coupled with growth factors and osteoprogenitor cells may represent a valuable alternative to autologous bone transplantation for the reconstruction of the maxillary sinus.