



A clinical study of the outcomes and complications associated with maxillary sinus augmentation

ABSTRACT

The sinus lift procedure is performed in order to increase the bone volume in the lateral maxilla and allow the use of dental implants. The dental implants can either be placed simultaneously when there is sufficient bone height, or be placed in a second moment, after an augmentation procedure.

The aim of this study was to evaluate the rate of complications in maxillary sinus floor augmentation surgery and the impact of complications on subsequent implant treatment in a patient population with severe maxillary atrophy scheduled for treatment under general anaesthesia.

70 patients (124 sinuses) with severe maxillary atrophy were included in the study for the maxillary sinus augmentation treatment under general anaesthesia. In 93 sinuses, the treatment was performed with autogenous bone alone. The donor sites for bone harvesting included the mandibular symphysis or the antero-upper border of the iliac crest. The remaining 31 sinuses were augmented with a 1:1 mixture of autogenous bone and cortico-cancellous pig bone particles (OsteoBiol® Gen-Os, TecnoSS®, Giaveno, Italy). The particles had granulometry between 250 and 1000 µm. The bony sinus windows were covered with a resorbable collagen membrane. Finally, the mucoperiosteal flap was replaced and sutured using vertical interrupted mattress sutures.

CONCLUSIONS

In evaluating the intraoperative complications, the Authors found that the use of an onlay bone graft in conjunction with sinus augmentation appeared to significantly increase the rate of infective complications. Anyway, this study showed no significant correlations between the occurrence of complications and the type of filling material adopted in the maxillary sinus augmentation. Furthermore, it was observed that new bone formation took place within 6 months of the sinus lift operation. In particular, the Authors concluded that *“no radiographic discrepancies in the amount of bone regenerated were observed between sinuses where only autogenous bone was used and those where a 1:1 mixture of autogenous bone and cortico-cancellous pig bone particles was used”*.

LATERAL ACCESS SINUS LIFT

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