PATIENT-REPORTED OUTCOMES OF IMPLANT PLACEMENT PERFORMED CONCOMITANTLY WITH TRANSCRESTAL SINUS FLOOR ELEVATION OR ENTIRELY IN NATIVE BONE

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For patients receiving dental implants, the impact of conventional implant surgery and the related postoperative sequelae on daily life was shown to be minimal, limited to the first postoperative days (Al-Khabbaz et al. 2007, Seferli et al. 2014). In the posterior maxillary sextants, the insertion of implants of desired length and diameter may be limited by the dimensional alterations of the bone crest occurring following tooth loss (Eufinger et al. 1997, 1999, Pramstraller et al. 2011), partly due to the pneumatization of the maxillary sinus (Farina et al. 2011). Transcrestal maxillary sinus floor elevation (tSFE) represents an effective surgical option to vertically enhance the available bone in the edentulous posterior maxilla (Pjetursson & Lang 2014). tSFE, however, is not free of intra- and post-surgery complications, the most frequent being the perforation of the Schneiderian membrane and the occurrence of postoperative infection, respectively (Tan et al. 2008). In 2008, a procedure for tSFE was proposed (Trombelli et al. 2008). The major novelty resides in the fact that all manual and rotating instruments are used following a standardized sequence. Low incidence of intra- and post-surgical complications, low scores for patient pain/discomfort, limited postoperative assumption of analgesics and high propensity of patients to undergo the same surgery again if needed were reported for this technique (Trombelli et al. 2010, 2012, 2014, Franceschetti et al. 2014, 2015).

The present study was based on the hypothesis that tSFE does not increase the intra- and postoperative morbidity of implant surgery. To test this hypothesis, a multicenter retrospective case series was implemented to evaluate the patient-reported outcomes as well as the type and incidence of complications when implants are placed either concomitantly with tSFE or in native bone.

Data from the record charts of patients undergone implant placement for single-tooth rehabilitation in the posterior maxilla were retrospectively obtained from 4 clinical centers. Cases for tSFE group were included if they showed an extent of sinus lift ≥ 4 mm concomitantly to implant placement. Cases for N group were included when implant placement was performed entirely in native bone. Patient-reported outcomes had been assessed using 100-mm visual analogue scales (postoperative pain, VASpain) and visual rating scales (level of discomfort, VRSdiscomfort; willingness to undergo the same surgery, VRSwillingness). The dose of analgesics had been self-recorded.

A convenience sample of 14 patients and 17 patients (contributing with one implant site each) treated with tSFE and N, respectively, was obtained for the present study. Membrane perforation occurred in 1 tSFE case, without compromising the completion of the procedure. VASpain remained low (<12) in both groups. A tendency of VASpain to decrease with time was observed in both groups. The Area Under the Curve for VASpain (AUCpain), indicating the level of pain experience through the first week following surgery, was 18.0 (IR: 8.5 – 85.0) and 11.5 (IR: 4.5 – 18.5) in tSFE and N groups, respectively, with no significant inter-group differences (p= 0.084). The dose of analgesics was similarly low between groups. No significant inter-group difference in VRSdiscomfort and VRSwillingness was observed.

Implant placement performed either concomitantly with tSFE (according to Trombelli et al. 2009) or entirely in native bone are associated with limited incidence of complications, low postoperative pain and medication and are both well tolerated.