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# Combination of an hydraulic device and nanohydroxylapatite paste for minimally invasive transcrestal sinus floor elevation : procedure - 2 year results - endoscopic sinusal views.

## Purpose

The objectives of this presentation are to describe a transcrestal sinus floor elevation technique combining the use of an hydraulic device and a nanohydrxylapatite paste and to report on 2-year results.

## Materials and methods

The sinus floor elevation procedure used a specially designed drill (Sinusjet®) to start hydraulic sinus-membrane unsticking and a nanohydrxylapatite paste (Osslift® ) for further sinus-membrane elevation and bone augmentation. It was perfomed as a 1-step procedure with immediate implant placement, or a 2-step procedure with delayed implant placement 9 months later. Implant survival rate, sinus-membrane perforation, post-operative complications, and the level of intraoperative and postoperative patient comfort using a visual analogue scale were analyzed retrospectively. In one patient, the whole procedure was registered using two endoscopes ( 30° - 4k sinus endoscope – Olympus) to get endoscopic sinusal and buccal recordings.

## Results

120 sinus floor elevations were performed in 105 patients using Sinusjet ® and Osslift ® with a mean follow-up period of 2 years. In the 1-step procedure, the mean elevation was 8.1 +/-2.5 mm : 120 implants were placed. In the 2-step procedure, the mean elevation was 9.1 +/- 2.2 mm : 20 implants were placed. Sinus-membrane perforation was observed in less than 1% ( n = 1/120). 2 year implant survival rate was 99,3 % with 1 early implant loss (n=1/140). Those results were similar to those obtained in a previous retrospective study using Sinusjet ® and Ostim ® (136 sinus floor elevations – 202 implants - 110 patients) with a mean follow-up period of 4 years.

## Conclusions

This minimal invasive transcrestal sinus floor elevation procedure that combines an hydraulic device and nanohydrxylapatite paste appears safe and predictable.

## Keywords:

Dental implant, atrophic posterior maxilla, bone augmentation, sinus-floor elevation, transcrestal procedure, hydraulic device, nanocrystalline hydroxyapatite.