INTRODUCTION

Good therapists and biological knowledge can be combined into procedures with reduced treatment time and improved patient comfort without jeopardizing the clinical outcome.

By carefully choosing the appropriate techniques, materials and implant design it is possible to perform tooth extraction, sinus lift, procedure, implant placement and placement of healing abutment in one visit, and cut the healing time before definitive restoration to 3-4 months without jeopardizing the clinical outcome.

This study presents the scientific principles behind the technique, the concept and the clinical evidence behind the van Thoor technique.

CONCEPT

GBR membrane
- Allows bone formation in the critical areas
- Prevents resorption of bone graft
- Provides support for newly formed bone

Sinus implant design
- The 6.5 mm ProActive implant from Neoss is optimized for sinus procedures
- Wide implant body minimizes graft width and maximizes implant surface area
- Highly engaging threaded conical collar design ensures high primary stability
- Active implant surface

Sinus lift technique - where tooth extraction, sinus lift, implant placement and placement of healing abutment is done all in one visit

SCIENTIFIC PRINCIPLES

- Bone vitality and sinus graft blood supply is the best the first 9 mm from the crest and lowest at 15 mm from crest. Elevation of membrane did not impair blood flow.
- Average sinus dimensions (n=100):
  - 7 mm: 108, 145, 183, 217, 243
  - 8 mm: 187, 217, 267, 317, -
  - 9 mm: 77, 133, 190, 247, 304
- Evaluation of sinus cavity dimensions (n = 100) showed an average width in sinus lifts: 73 in crestal sinus lifts.
- Two implant failures occurred (lateral sinus lift), out of 192 placed implants, resulting in a survival rate of 98.3% after up to 5 years for the lateral sinus lift and 100% for the crestal sinus lift.
- There is no need for long implants in sinus lift procedures
- Bone healing is about 1 mm/month from the sinus bone wall to the implant
- Bone vitality in sinus grafts is preserved for fast bone formation and neoangiogenesis.

EVIDENCE

Hundred twenty eight (128) patients were treated with the sinus implant (36.5 mm Neoss ProActive) between June 2013 and January 2019. In total, 192 implants were placed; 7 mm (19), 8 mm (44), 9 mm (31), 11 mm (32). 119 implants were used in lateral sinus lifts; 73 in crestal sinus lifts. Two implant failures occurred (lateral sinus lift), out of 192 placed implants. Implant survival rate was 98.3% after up to 5 years for the lateral sinus lift and 100% for the crestal sinus lift.

- To achieve 3-4 months healing time, a gap of 3-4 mm between implant and bone wall is ideal. This is achieved with a 6.5 mm diameter implant.