PROPOSED NEW SURGICAL TECHNIQUE FOR THE TREATMENT OF EDENTULISM IN PATIENTS WITH SEVERE MANDIBULAR ATROPHY:
THE SIDE BRACKET CONFIGURATION IMPLANT (“S Implant” or “Snake Implant”)

Until 1998, the treatment of edentulism in the presence of severe mandibular atrophy presented two types of approach: the repositioning of the mandibular canal and the reconstruction of the mandibular bone crest by apposition of autogenous bone.

These techniques are often rejected by patients.

The mandibular canal repositioning has become obsolete because of a number of more or less serious residual effects of nerve manipulation, while the crestal reconstruction with blocks of autogenous or bank bone is often rejected by patients because of being invasive (the surgical damage is really important), unpredictability (the percentage of resorption in time is really important) and finally because of the discouragingly lengthy treatment duration.

Also, in the absence of acceptable treatments allowing the recovery social relationships in a very short time after surgery, and of relatively short times for prosthetics solutions, some patients are excluded from any rehabilitating surgery and undergo severe clinical and functional degeneration.

The S implant has been conceived precisely to face the needs and demands of this category of patients. It is a treatment for this condition, where often it remains the only practical solution. The alternatives are in removable partial prostheses or a total removable denture in case of an edentulous mandible.

The first surgery, performed more than ten yeas ago, was made on a 54 years old male patient, VP, affected by a severe right mandibular atrophy. Many surgeries have been performed since then, with a very high percentage of success. We are preparing a presentation of all available data.

The surgery, planned after a CAT scan, to obtain a map of all internal mandibular bone heights, is relatively simple but requires enormous surgical precision.

After opening a fairly deep buccal flap, an inspection of the mandibular body is carried out, and its internal morphology is identified, by natural and CAT scan reference points. The insertion point is identified by the appropriate triangulations with respect to the mandibular plane. The insertion point must be calculated precisely, because it has to allow the drill to penetrate diagonally and produce a hole ending under the mandibular canal. As the drill is withdrawn a curved groove has to be created along the upper buccal wall of the mandible, up to the crest top.

The implant used is a Tramonte, of diameter 2.5 mm.

Then the implant is inserted up to the point where its tip is perfectly lodged under the mandibular canal. Then the body of the implant is accommodated in the previously prepared groove, and its head is bent to be vertical. The implant shaped in this way is lodged in the deeper part of the mandible, under, then buccally to the mandibular canal. After its emergence, approximately in the

median area of the buccal wall, at an angle of approximately 45° on the horizontal plane, it is laid on the mandibular surface in a lingual direction up to reaching the crest, where a last bend brings its head parallelised to other implant heads and its major axis on the sagittal plane there located.

As the manoeuvre is completed and the implant is perfectly formed and positioned, the threads remaining on the upper part of its body are removed. Then a resorbable membrane is placed on the area to cover completely the implant parts external to the mandible, then the flap is sutured.

The splinting bar is then applied by electrical intraoral welding and the temporary prosthesis is mounted.

After two/three months, the permanent prosthesis is made and mounted.

Finally, it can be said that the proposed S implant technique is a valid alternative to other, more o nerous and invasive rehabilitation techniques.