AMERICAN ACADEMY OF IMPLANT DENTISTRY

Restorative Dentistry:

Using the N.I.R.I.S.A.B Concept

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For more than 50 years, Dr. Hilt Tatum Jr. has pioneered the field of implant dentistry. Within the past decade he has entitled his approach to the field "NIRISAB". NIRISAB is an acronym for Natural Implant Restoration in Stable Alveolar Bone. "NIRISAB" is a philosophy, a concept of how to approach the end goal of restoring the presenting patient to normal contour, esthetics, speech, and health, regardless of the degree of atrophy, disease, or injury to the stomatognathic system. Dr. Tatum expresses that he arrived at this name simply because every word both collectively and independently takes on an important meaning for the field of implant dentistry. "Natural Implant Restoration" is of obvious importance because the goal for all modern dentists should be to have the final prosthesis appear and function as natural as possible. Alveolar bone is crucial to success because it possesses the genetic coding to allow for greater predictability of integration, functional load capacity and long-term stability, therefore providing meaning to the latter part of the NIRISAB name, "Stable Alveolar Bone." This philosophy or concept includes but is not limited to Sinus Grafting (lateral wall subantral augmentation), bone expansion (Compaction and Manipulation), soft tissue grafting, bone grafting through remote incisions, Vascularized Segmental Osteotomies and Nerve Lateralization.

This Case Report:

Our case is a familiar scenario for all restoring dentists. Our patient is a 53-year-old female who presents with a Kennedy Class III partial edentulous maxillary arch (Fig. 1).

She currently has a combination of a Fixed Prosthesis in her anterior segment with precision attachments and a removable prosthetic replacing her edentulous segments support by posterior crowns with mesial rest seats (Fig. 2).

Her desire is simply to improve her smile and if possible, eliminate her removable partial denture.

FIGURE 1.
Pre-operative clinical without prosthesis

FIGURE 2.
Pre-operative clinical with prosthesis

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The approach to this case embodies the NIRISAB philosophy with a particular embrace to the "Sinus Grafting "and the "Bone Expansion/Manipulation" components. Under a surgical aseptic field and via the use of conscious I.V. sedation and local anesthesia, a crestal incision along with a Tatum papilla releasing incision was created on the patient's right maxillary arch (Fig 3a). Then following careful periosteal reflection a window was made into the maxillary sinus via the use of a #10 round bur under copious irrigation. This was followed by a series of specially designed Tatum sinus elevators used to elevate the schneiderian lining. A collagen membrane from Salvin Dental and seven grams of irradiated cortical cancellous particulate bone from the Rocky Mountain Tissue Bank were placed into the sinus window (Fig 3b-3c). Closure was accomplished by a continuous 3-0 vicryl suture.

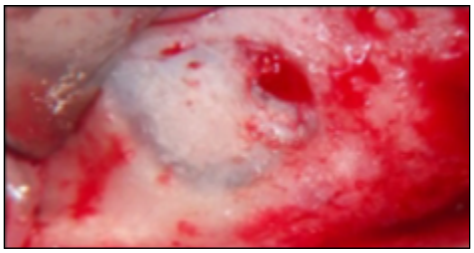

FIGURE 3a.
Revealing the window to the sinus cavity

FIGURE 3b.
Collagen membrane placed into the sinus cavity

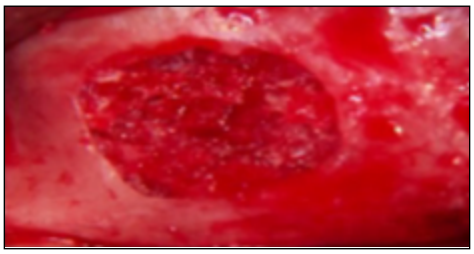

FIGURE 3c.
7 gms of irradiated cancellous particulate bone mixed with patient's PRP in sinus cavity

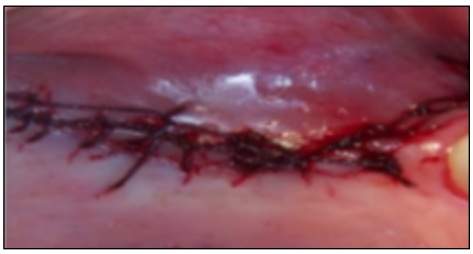

FIGURE 3d.
Closure was accomplished by a continuous 3-0 vicryl suture

Following a period of four months, eight (8) endosseous transmucosal Tatum implants were placed. Seven (7) tapered in the posterior edentulous segments and one specially designed D-2 implant at the severely atrophic (2mm) edentulous right central incisor via bone expansion (Fig 4). Following a six-month integration period, the case was restored with the uniquely patented "unipost" prosthetic system with its varying post angles for ease of restorative execution (Fig 5-8).

FIGURE 4.
Pre-operative image displaying a narrow atrophic ridge

FIGURE 5.
Mirror view: D-2 implant placed in site to maximize bone to implant surface area for strength in a narrow atrophic ridge site

FIGURE 6.
Occlusal view post implant integration with healing abutments removed

FIGURE 7.
Evaluating the opposing dentition by using Tatum post guide try-in. This evaluation will allow the restored implants to have a non-traumatic occlusal relationship with the opposing teeth

FIGURE 8.
Selected post components prepped for final impression

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FIGURE 9.
Left lateral view: Prepped post displaying normal contour for anatomically correct final restorations

FIGURE 10.
Right lateral view: prepped post displaying normal contour for anatomically correct final restorations

FIGURE 11.
Right lateral view

Kodak 9500 CBCT Image/Panorex/Final Images

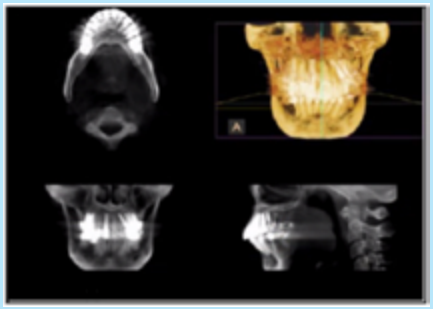

FIGURE 12.
Left lateral view

FIGURE 13.
Frontal view: Displaying the prepared abutments allowing normal contour for anatomically correct final restorations

FIGURE 14.
Final image of frontal view: Displaying proper material dimensions for strength and longevity of restorations while maintain the normal emergence profile

The occlusal scheme was designed to be a mutually protected implant occlusion. The centric contacts on the implant restorations were nonexistent in light-centric and present in tight- centric. Lateral excursion provided disclusion of the implant restorations. Ultimately, the use of NIRISAB philosophy provided a predictable approach to restore this patient to a state of health, contour, function and esthetics. She has tolerated the course of the procedures well and expressed extreme pleasure with the restorative outcome.

Natural Implant Restoration in Stable Alveolar Bone