



Implant rehabilitation of the atrophic edentulous maxilla, from bone grafting to graftless solutions with immediate loading

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Abstract :

Autogenous bone grafting—combined or not with Le Fort I osteotomy—and graftless solutions—All-on-4 treatment concept—are two reliable techniques for the fixed rehabilitation of atrophic edentulous maxillae.

The All-on-4 treatment concept, with the placement of conventional and/or zygomatic im-plants, allows for a shorter treatment without grafting protocol. A full-arch

rehabilitation is achieved with only four implants, combined with immediate loading, with a reduction of mor-bidity.

All-on-4 has proven to be an excellent alternative to conventional bone grafting techniques. Since the initial description of this technique by Brånemark and later by Paulo Maló in the 1990s, numerous studies have shown very high implant and prosthetic survival/success rates with few biological complications. This solution can be proposed as a first-line therapeutic option in the vast majority of cases, but we will see that bone reconstruction, in particular Le Fort I-graft, is still required for some indications in special cases.

We will also discuss the new custom-made implants, which are considered to be the revival of subperiosteal implants, but without the known complications. These implants are machined from three-dimensional imaging and used to avoid the placement of zygomatic implants in cases of severe and extensive bone atrophy.