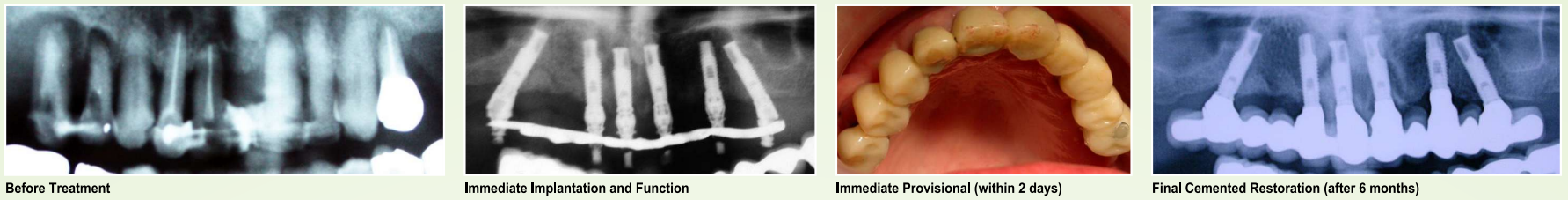


Graftless Cemented Rehabilitation of the Atrophied Jaws using Immediate Function

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All-on-6 Concept. A Prospective 3 Years Clinical Study.



Introduction

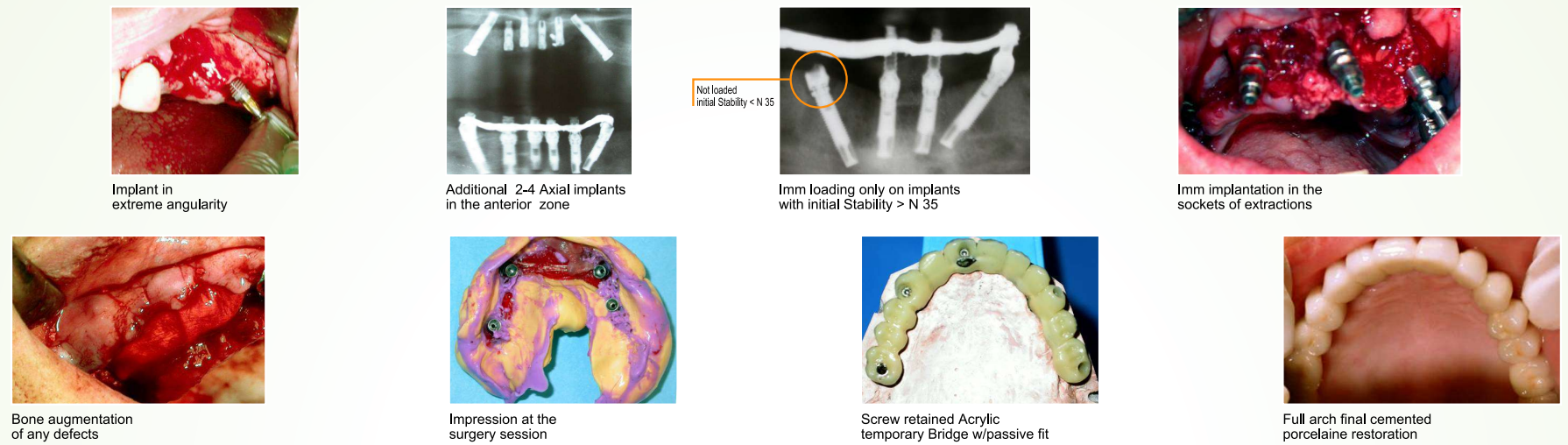
The rehabilitation of the edentulous maxilla and mandible, is very often a complicated procedure in those patients who desire for non removal and aesthetic prosthesis. Very often the placement of implants in the posterior maxilla and mandible, is impossible without prior bone grafting. Graftless rehabilitation by placing implants in remaining bone volume is a challenge. Immediate function and immediate loading on implants placed on post extraction sockets add to this challenge.

Aim of the study

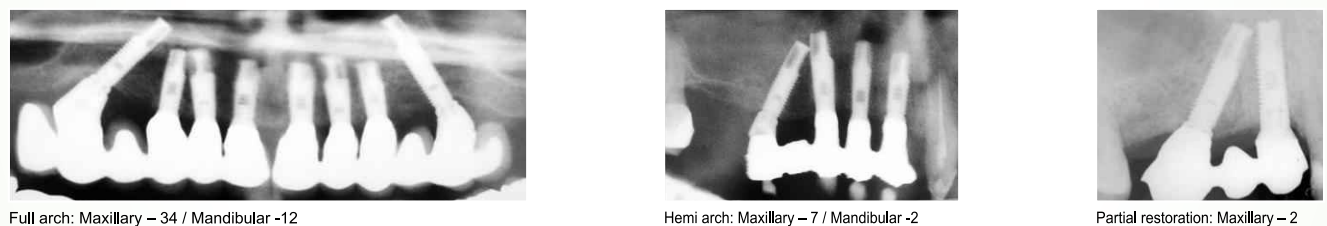
The objective of this study is to evaluate a simplified treatment concept for fixed and cemented rehabilitation of the atrophic jaws, using implants inserted at an extreme angle and subjected to immediate function.

Materials and Methods

49 patients were included in this study. 103 implants with oxidized surface were placed in extreme angularity up to 45 degree located mesially to the anterior wall of the maxillary sinuses, or mesially to the mental foramens. Additional 2-6 oxidised or rough surface implants were placed at the anterior zone to support all together 57 fixed partial or full arch prostheses. Immediately function was applied on all titled implants in addition to 2 implants at least at the anterior zone. In some cases immediate loading on implants placed on post extraction sockets was performed. The patients were followed for 6-36 months after the surgery. Clinical and radiographic evaluation of the change of the marginal bone level were performed.



Number of Prostheses according to the type of Restoration.



Tilted Implant Distribution according to implant location

Maxilla Tooth Position	16	15	14	24	25	26
Number of implants	15	21	3	2	22	18
Mandible Tooth Position	46	45	44	34	35	36
Number of Implants	4	7	1	-	9	1

Length of Final Full Arch (with 1 distal cantilever)

10 Teeth Arch - 2 nd Premolar occlusion	6%
12 Teeth Arch - 1 st Molar occlusion	57%
14 Teeth Arch - 2 nd Molar occlusion	37%

Tilted Implant Distribution according to implant size

Implant Diameter mm	Implant Length mm				Total
	11.5	13	15	18	
3.3	1	-	2	1	4
3.75	-	4	23	37	64
4	-	5	11	19	35
Total	1	9	36	57	103

Results

3 titled implants were failed in 3 patients, giving a cumulative survival rate of 96.3% in the maxilla and 100% in the mandible. No failure of the provisional acrylic fixed screw retained prostheses was occurred. All failures of tilted implants occurred within 3 months from insertion.

Time Period	Implants	Failed	CSR%
Placement	103	0	100.0%
0-6 months	103	3	97.08%
7-9 months	85	0	97.08%
10-12 months	64	0	97.08%
13-24 months	51	0	97.08%
25-36 months	26	0	97.08%

Implant Loading	Total	Failed	SR%
Maxilla Titled	81	3	96.3%
Maxilla Axial	115	1	99.1%
Mandible Titled	22	-	100.0%
Mandible Axial	32	-	100.0%



Marginal Bone change around Tilted Implants after 1 year: 1.2+/-0.9 mm

Conclusion

Graftless rehabilitation of the atrophied maxilla and mandible, using titled implants with immediate function may be a viable treatment approach, with the benefits of: Reducing the surgical invasion and morbidity, Shortening the treatment time, Reducing costs of treatment and improving quality of life during the treatment..

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