

# Patient satisfaction and comfort after a full-arch immediate loading rehabilitation: a preliminary study

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## Purpose

The aim of this study was to evaluate the satisfaction of patients rehabilitated with an immediate loading full-arch prosthesis (Columbus Bridge Protocol, CBP, **fig. 1-4**) and the potential changes made in their quality of life due to this treatment.

## Materials and methods

Between January and September 2012 we studied 7 patients in need of a full-arch immediate loading rehabilitation of one or both dental arches (**Table 1**). Each patient answered a 26-questions questionnaire at a pre-surgical appointment (T0), 1 week after surgery (T1) and 2 months (T2) after surgery. A single dentist realized all the interviews, which lasted in average 15 minutes each. The questionnaires realized were inspired by the statement of Oral Health Impact Profile (OHIP). The questions were related to: pain, chewing ability, phonetics, aesthetics, home hygiene procedures, patient satisfaction.

For categorical variables differences in the scores at the 3 time points were assessed by Cochran's test. If a statistically significant difference was found, post-hoc pair wise comparisons were performed by McNemar test. For multinomial data differences in the scores were evaluated with Marginal Homogeneity test, comparing each pair individually. A  $p \leq 0.05$  was considered statistically significant and a Bonferroni-corrected p-value of 0.017 was considered statistically significant for paired comparisons.

## Results

A total of 7 patients were assessed and only questions common to all questionnaires were considered for statistical analysis. No statistically significant difference between the 3 time points was noticed for variables regarding pain during chewing, smoking, phonetic difficulty, tense, avoiding smiling, difficulty in relating to others, instruments used for oral hygiene and difficulties to use them. A statistically significant difference between t0 and t2 was observed for the variables regarding satisfaction as regards ability to chew ( $p=0.023$ ), and between t0 and t1 about satisfaction with the aesthetic appearance of teeth ( $p=0.041$ ) with better values at t2 and t1 respectively (**Table 2**).

## Conclusions

On the basis of this preliminary evaluation, patients treated with CBP reported a better chewing ability and a greater satisfaction with their aesthetic appearance compared to pre-treatment assessments. All the patients were pleased with support and information received by the clinicians and they felt that CBP was an effective therapy for their oral problems. However further investigation on a greater number of patients is needed to confirm these results.

## References

1. **Babbush C**. "Post-treatment Quantification of Patient Experiences With Full-Arch Implant Treatment Using a Modification of the OHIP-14 Questionnaire" *Journal of Oral Implantology* 2012; 38(3):251-260.
2. **Eitner S**, Wichmann M, Schlegel KA, Kollmannsberger JE, Nickenig HJ. "Oral health-related quality of life and implant therapy: an evaluation of preoperative, intermediate, and post-treatment assessments of patients and physicians" *J Craniomaxillofac Surg.* 2012; 40(1):20-3.
3. **Erkapers M**, Ekstrand K, Baer RA, Toljanic JA, Thor A. "Patient satisfaction following dental implant treatment with immediate loading in the edentulous atrophic maxilla" *Int J Oral Maxillofac Implants.* 2011; 26(2):356-64.
4. **Zani SR**, Rivaldo EG, Frasca LC, Caye LF. "Oral health implant profile and prosthetic condition in edentulous patients rehabilitated with implant-supported overdentures and fixed prostheses", *J Oral Sci.* 2009 Dec;51(4):535-43.
5. **Tealdo T**, Bevilacqua M, Menini M, Pera F, Ravera G, Drago C, Pera P. "Immediate Versus Delayed Loading of Dental Implants in Edentulous Maxillae: A 36-Month Prospective Study" *The International Journal of Prosthodontics* (2011); 24(4):294-302
6. **Slade G**, Spencer A. "Development an evaluation of The Oral Health Impact Profile" *Community Dent Health* 1994;11:3-11.



Fig. 1 Presurgical smile

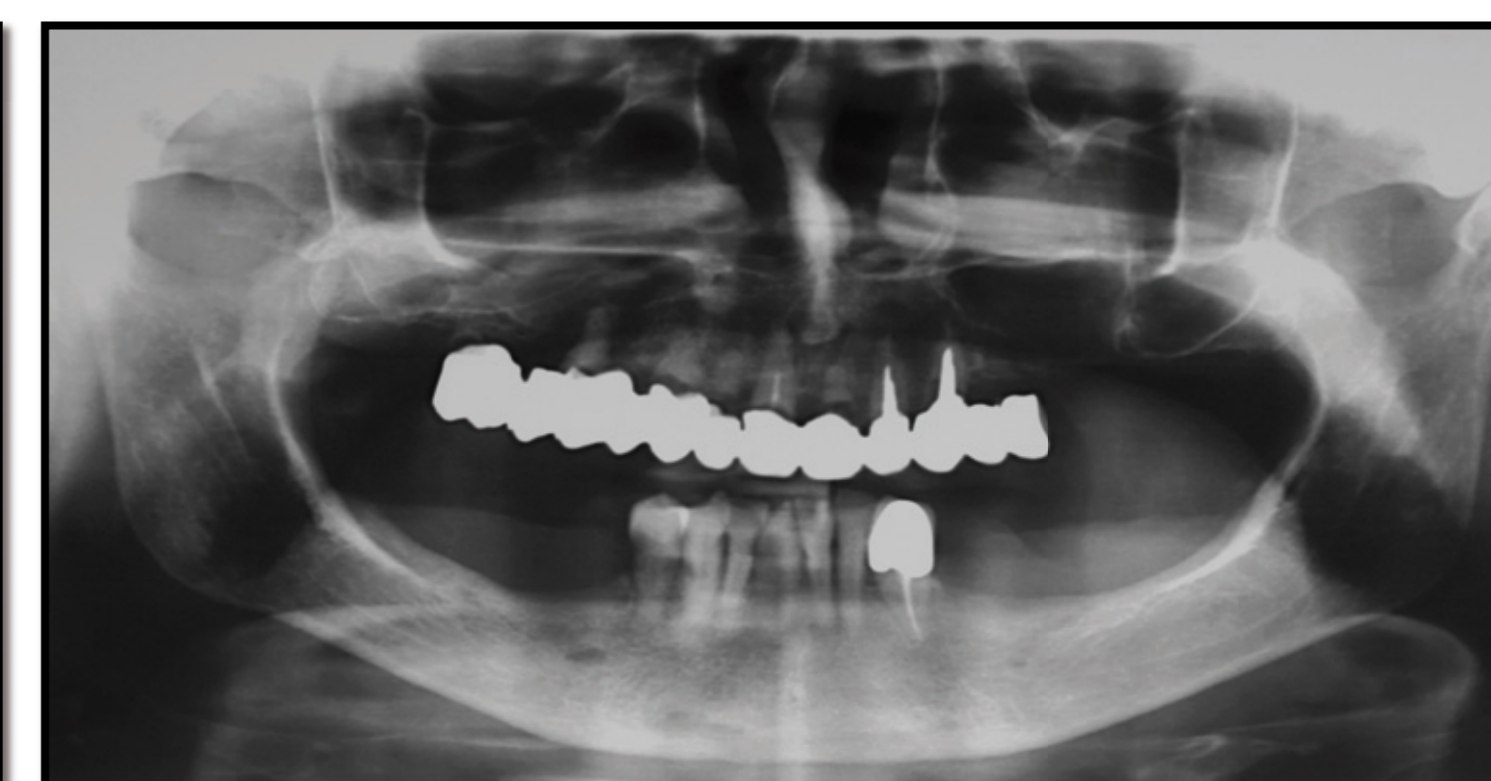


Fig. 2 Presurgical OPT



Fig. 3 Smile after 1 week from surgery

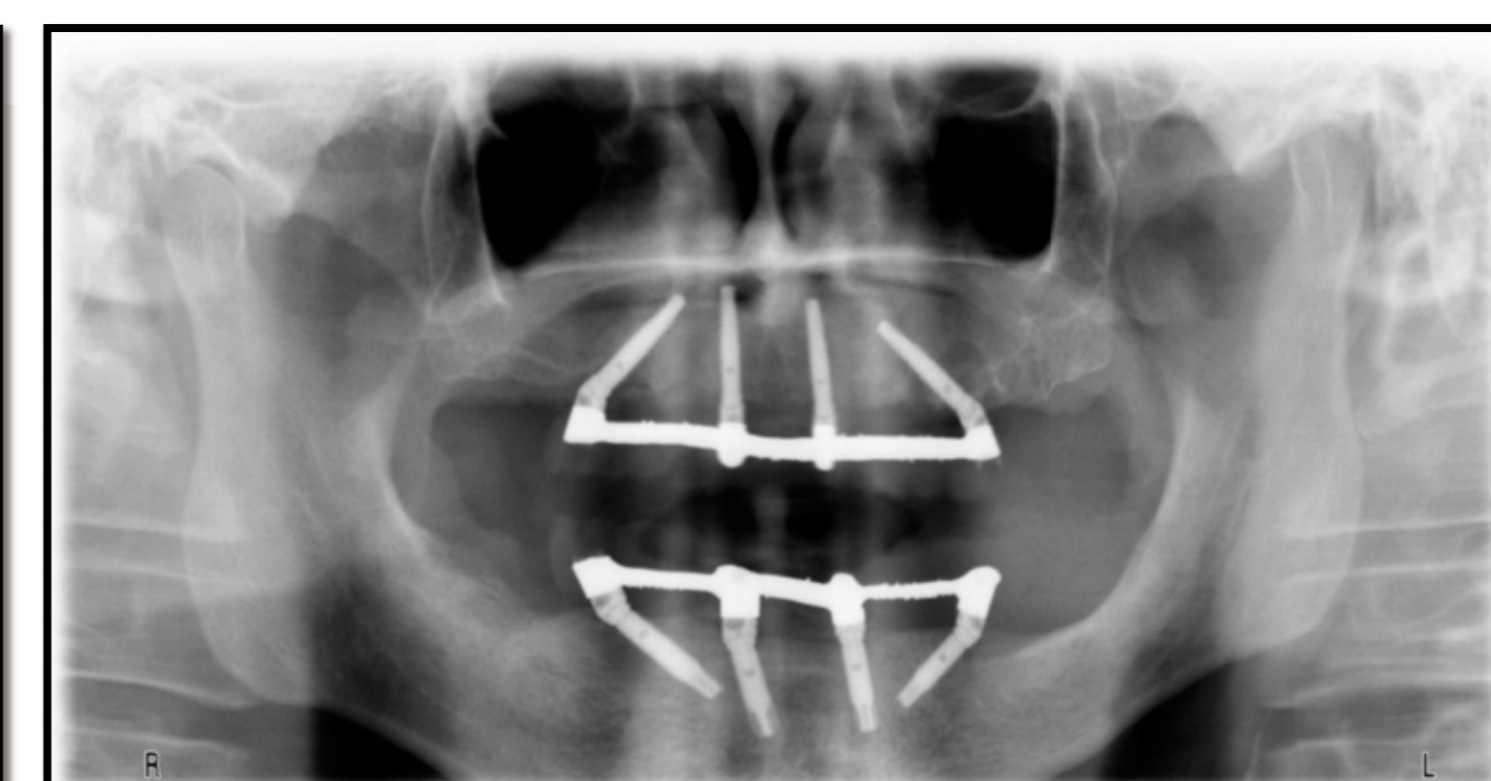


Fig. 4 OPT after surgery

Characteristics of the study population

Characteristics of the study population	
Sex	
Male	3
Female	4
Mean age (years)	59,28
<b>Smokers</b>	1
<b>Cause of tooth extraction</b>	
Periodontal disease	3
Endodontic problems	3
Destructive carious lesions	1
<b>Arch treated</b>	
Superior	6
Inferior	1
<b>Antagonist's condition</b>	
Natural teeth	5
Fixed Prostheses	1
Removable Prostheses	1

Table 1.

Statistical analysis	N	P value
Pain chewing	7	0,097
Difficulty in chewing some foods	7	0,549
Avoid eating some foods	7	0,311
Interruption of meals for difficulty in chewing	7	0,050
Satisfaction with ability to chew	(t0 vs t1)	0,083
	(t0 vs t2)	0,023*
	(t1 vs t2)	0,180
Smoking	7	1,00
Difficulty in pronouncing certain phonemes	7	0,091
Satisfaction of own phonatory ability	(t0 vs t1)	0,180
	(t0 vs t2)	0,096
	(t1 vs t2)	0,206
Embarrassment or tense	7	0,717
Satisfaction with the appearance of own teeth	(t0 vs t1)	0,041*
	(t0 vs t2)	0,228
	(t1 vs t2)	0,467
Avoiding smiling not to show teeth	7	0,368
Difficulty in relating to others because of teeth	7	0,607
Instruments used for oral hygiene	(t0 vs t1)	1,00
	(t0 vs t2)	0,564
	(t1 vs t2)	0,739
Difficulties in performing the cleaning of teeth	(t0 vs t1)	0,088
	(t0 vs t2)	0,157
	(t1 vs t2)	0,527

\* $p < 0,05$

Table 2