

Factors predicting tooth loss in periodontally treated patients

Language: English

Authors:

Dr. med.dent. Bernadette Pretzl, Sektion Parodontologie der Poliklinik für Zahnerhaltungskunde, Universitätsklinikum Heidelberg
 Professor Dr. med.dent. Peter Eickholz, Abteilung für Parodontologie, Zentrum für Zahn-, Mund-Kiefer-Heilkunde (Carolinum) der Johann Wolfgang Goethe-Universität Frankfurt

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Objectives

The aim of this study was to assess factors contributing to tooth loss 10 years after initiation of periodontal treatment.

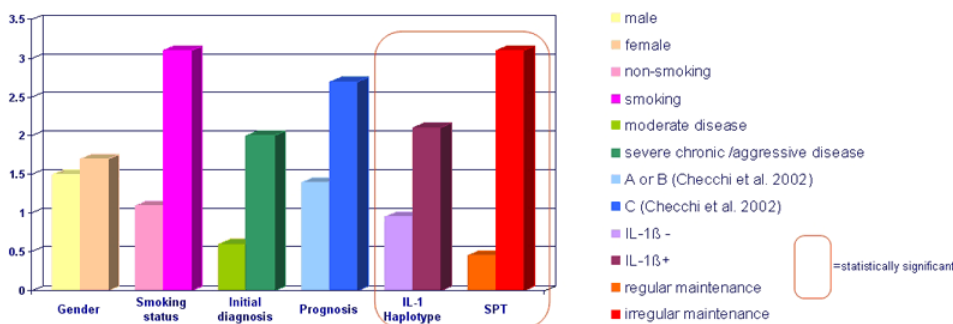


Fig. 1: Tooth loss per patient

Material and Methods

Patients

- 93 adult patients
- written informed consent
- periodontal treatment initiated 10 years ago
- completion of antiinfectious therapy
- full-mouth radiographs from beginning of therapy

Documentation

- medical files searched for initial diagnosis
- documentation of tooth loss
- Frequency of supportive periodontal therapy
- prognosis index (Checchi et al. 2002)

Examination

- clinical examination including periodontal findings by the same examiner
- GBI (Ainamo & Bay 1975)
- PCR (O'Leary 1972)
- Periodontal status (SSO criteria 2000)
- samples for Interleukin-1-testing (IAI, Zuchwil/CH; Hain Lifescience, Nehren/Germany)
- detailed questionnaire on smoking, dental care, social status, and nutrition

Statistical Analysis

- statistical unit: single patient
- primary outcome variable: tooth loss
- secondary outcome variable: periodontal status (SSO 2000)
- Statistical Software Package SPSS 14.0
- Linear stepwise regression

Results

The periodontal situation (GBI, PCR, pocket depths, BOP, SUP, esthetics, pain) was more favorable in patients with at least one SPT per year. The difference between regular and irregular maintenance patients could be proven to be statistically significant ($p=0.024$).

Results II		Tooth Loss p	
Gender	male	1.5 ± 3.5	0.979
	female	1.7 ± 3.9	
Smoking Status	non-smoking	1.1 ± 1.8	0.974
	smoking	3.1 ± 6.5	
Initial Diagnosis	moderate chronic	0.6 ± 1.4	0.981
	aggressive/sev. chron.	2.0 ± 4.2	
Prognosis (Checchi et al. 2002)	A or B	1.4 ± 2.4	0.962
	C	2.7 ± 4.9	
IL-1 Haplotype	negative	0.9 ± 4.7	0.049
	positive	2.1 ± 1.3	
Maintenance	regular	0.4 ± 0.8	0.001
	irregular	3.1 ± 5.1	

Model	Non-standardised coefficients		Standardised coefficients		
	B	Standard Deviation	Beta	T	Significance
1 (Constant)	0.440	0.421		1.044	0.299
SPT for SPSS	2.165	0.641	0.342	3.377	0.001
2 (Constant)	-0.730	0.487		-0.150	0.881
SPT for SPSS	2.206	0.631	0.349	3.498	0.001
IL-1 for SPSS	1.282	0.642	0.199	1.999	0.049

Results III: Coefficients, dependent variable: lost teeth

Conclusions

Some criteria seem to interact with tooth loss whereas only regular SPT and absence of IL-1 haplotype could be proven to be statistically significant in prevention of tooth loss.

This Poster was submitted by Dr. med.dent. Bernadette Pretzl.

Correspondence address:

Dr. med.dent. Bernadette Pretzl
 Sektion Parodontologie der Poliklinik für Zahnerhaltungskunde
 Universitätsklinikum Heidelberg
 Im Neuenheimer Feld 400
 69120 Heidelberg



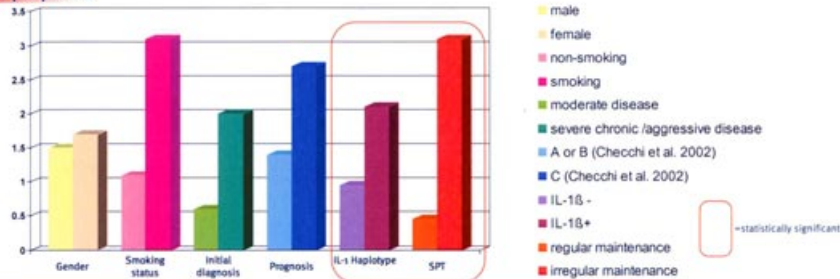
Factors predicting tooth loss in periodontally treated patients

Pretzl, B.¹, Eickholz, P.²

¹ Section of Periodontology, Department of Conservative Dentistry, Clinic for Oral, Dental and Maxillofacial Diseases, University Hospital Heidelberg

² Dept. of Periodontology, Center for Dental, Oral, and Maxillofacial Medicine, Hospital of Johann Wolfgang Goethe-University Frankfurt

Tooth loss per patient



Objective

The aim of this study was to assess factors contributing to tooth loss 10 years after initiation of periodontal treatment.

Material and Methods

- Patients**
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 - written informed consent
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Material and Methods II

- Statistical Analysis**
- statistical unit: single patient
 - primary outcome variable: tooth loss
 - secondary outcome variable: periodontal status (SSO 2000)
 - Statistical Software Package SPSS 14.0
 - Linear stepwise regression

Results I

The periodontal situation (GBI, PCR, pocket depths, BOP, SUP, esthetics, pain) was more favorable in patients with at least one SPT per year.

The difference between regular and irregular maintenance patients could be proven to be statistically significant ($p=0.024$).

Correspondence

Dr. Bernadette Pretzl
 Section of Periodontology
 Department of Conservative Dentistry
 Clinic for Oral, Dental and Maxillofacial Diseases
 University Hospital Heidelberg
 Im Neuenheimer Feld 400
 D-69120 Heidelberg
 Tel.: +49-6221-56 60 20
 Fax: +49-6221-56 59 74
 Bernadette_pretzl@med.uni-heidelberg.de

Results II

		Tooth Loss	p
Gender	male	1.5 ± 3.5	0.979
	female	1.7 ± 3.9	
Smoking Status	non-smoking	1.1 ± 1.8	0.974
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Results III

Model	Coefficients ⁽¹⁾		T	Significance	
	Non-standardised coefficients	Standardised coefficients			
1 (Constant)	0.440	0.421	1.044	0.299	
SPT for SPSS	2.165	0.641	0.342	3.377	0.001
2 (Constant)	-0.730	0.487	-0.150	0.881	
SPT for SPSS	2.206	0.631	0.349	3.498	0.001
IL-1 for SPSS	1.282	0.642	0.199	1.999	0.049

⁽¹⁾ Dependent variable: lost teeth

Conclusions

Some criteria seem to interact with tooth loss whereas only regular SPT and absence of IL-1 haplotype could be proven to be statistically significant in prevention of tooth loss.

Acknowledgement

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