The periodontal patient from a prosthodontist’s view

Asbjørn Jokstad

(prosthodontist): def.

Expensive dentist that enjoys to grind with big drills and fabricate large fake white teeth
Who is a periodontal patient?

1. Signs of active periodontal disease
   - Pocket depth? Bleeding on probing? ..on sight? Sensitivity/specificity?

2. Obvious risk factors for periodontal disease
   - Oral hygiene?
   - P.I. / G.I.
   - Bone level changes?
   - Microbiology?
The average clinician may

- recognize active peri-odontal/-implant disease and intervene correctly or refer

- recognize active peri-odontal/-implant disease, but doesn’t intervene correctly or refer – under-treatment

- recognize and treat peri-odontal/-implant disease, in spite of being non-existent – over-treatment

- not recognize active peri-odontal/-implant disease prior to prosthodontic therapy
How well does the average clinician recognize active peri-odontal/-implant disease?

Is there an indication of something big here?

1. Use of right diagnostic tools?
2. The skills to use the right diagnostic tools?
How well does the average clinician recognize active peri-odontal/-implant disease?

Is there an indication of something big here?

1. Use of right diagnostic tools?
2. The skills to use the right diagnostic tools?
3. Perceptive abilities?
How well does the average clinician recognize active peri-odontal/-implant disease?

1. Use of right diagnostic tools?
2. The skills to use the right diagnostic tools?
3. Perceptive abilities?
4. Correct interpretation of signs and symptoms?

Is there an indication of something big here?
How well does the average clinician recognize active peri-odontal/-implant disease?

1. Use of right diagnostic tools?
2. The skills to use the right diagnostic tools?
3. Perceptive abilities?
4. Correct interpretation of signs and symptoms?
5. Adequate judgment of the patient’s needs?

Is there an indication of something big here?
How well does the average clinician recognize active peri-odontal/-implant disease?

The sum of minor indications may indicate something bigger!

What do non-periodontists actually know about the current plethora of diagnoses of periodontal diseases & conditions?
I. Gingivale sykdommer
   A. Plakk-indusert gingivale sykdommer
   B. Ikke-plakk-indusert gingivale lesjoner

II. Kronisk periodontitt

III. Aggressiv periodontitt

IV. Periodontitt som manifestasjon av systemisk sykdom

V. Nekrotiserende periodontale sykdommer

VI. Abscesser i periodontiet

VII. Periodontitt assosiert med endodontiske lesjoner

VIII. Utviklings- eller ervervede deformiteter og tilstander


Norwegian translation: Anne M. Gussgard, DDS, MSc
I. Gingivale sykdommer

A. Plakk-indusert gingivale sykdommer
1) Gingivitt utelukkende assosiert med plakk
   a) Uten andre lokale medvirkende faktorer
   b) Med andre lokale medvirkende faktorer
2) Gingivale sykdommer modifisert av systemiske faktorer
   a) Assosiert med det endokrine system
   b) Assosiert med blodsykdommer
3) Medikamentelt modifisert gingival sykdom
4) Gingival sykdom på grunn av feilernæring

B. Ikke-plakk-indusert gingivale lesjoner
1. Gingival sykdom med spesifikk bakteriell opprinnelse
2. Gingival sykdom med viral opprinnelse
3. Gingival sykdom med sopps opprinnelse
4. Gingival sykdom med genetisk opprinnelse
5. Gingival manifestasjoner av systemiske sykdommer
   a) Slimhinnesykdommer
      1) Lichen planus
      2) Pemphigoid
      3) Pemphigus vulgaris
      4) Erytema multiforme
      5) Lupus erythematosus
      6) Medikament-indusert
      7) Andre
   b. Allergiske reaksjoner
      1) Dentale fyllingsmaterialer
         a) Kvikksølv, b) Nikkel, c) Akryl d) Annet
      2) Reaksjoner som skyldes
         a) Tannpasta, b) Munnskyllevæske
d) Tyggegummi d) Mat/tilsetningsstoffer
      3) Andre årsaker
6. Traumatiske lesjoner
   a) Kjemisk skade b) Fysisk skade c) Termisk skade
7. Fremmedlegerre reaksjoner
8. Ellers ikke spesifisert

The American Academy of Periodontology. (Armitage GC. 1999)
Norwegian translation: Anne M. Gussgard, DDS, MSc
II. Kronisk periodontitt  
A. Lokalisert  
B. Generell  

III. Aggressiv periodontitt  
A. Lokalisert  
B. Generell  

IV. Periodontitt som manifestasjon av systemisk sykdom  
A. Assosiert med hematologiske sykdommer  
   1. Ervervet neutropeni  
   2. Leukemier  
   3. Andre  
B. Assosiert med genetiske sykdommer  
   1. Familiær neutropeni  
   2. Downs syndrom  
   3. Leukocytt adhesjonsvikt (LAD)  
   4. Papillon-Lefevre syndrom  
   5. Histocytose  
   6. Chediak-Higashi syndrom  
   7. Glykogenlagring lidelse  
   8. Infantil genetisk agranulocytose  
   9. Cohens syndrom  
  10. Ehlers-Danlos syndrom  
  11. Hypophosphatase  
  12. Andre  
C. Ellers ikke spesifisert  

The American Academy of Periodontology. (Armitage GC. 1999)  
Norwegian translation: Anne M. Gussgard, DDS, MSc
V. Nekrotiserende periodontale sykdommer
   A. Nekrotiserende ulcerativ gingivitt (NUG)
   B. Nekrotiserende ulcerativ periodontitt (NUP)

VI. Abscesser i periodontiet
   A. Gingival abscess
   B. Periodontal abscess
   C. Pericoronal abscess

VII. Periodontitt assosiert med endodontiske lesjoner
     Kombinert perio-endo lesjon

VIII. Utviklings- eller ervervede deformiteter og tilstander
     A Lokaliserte tannrelaterte tannfaktorer som kan påvirke eller predisponere for plakkindusert gingivitt/periodontitt
       1. Tannanatomiske faktorer
       2. Dentale restaureringer
       3. Rotfrakturer
       4. Cervikale rotresorpsjoner
     B. Muko-gingivale deformiteter og tilstander rundt tenner
       1. Gingival bløtvevsretraksjon
       2. Manglende keratinisert gingiva
       3. Minsket vestibulær dybde
       4. Stramt leppebånd
       5. Gingiva-overskudd
       6. Unormal gingival farge

C Muko–gingivale deformiteter og tilstander i tannløs kjeve
   1. Vertikal og/eller horisontal kjevekamsdefekt
   2. Manglende gingiva/keratinisert vev
   3. Gingival/bløtvevs fortykning
   4. Stramt leppebånd/muskelfester
   5. Minsket vestibulær dybde
   6. Unormal farge

D. Okkklusal traume
   1. Primær okkklusal traume
   2. Sekundær okkklusal traume
What does prosthodontists wish to obtain from periodontists?

1. The patient returned with no active periodontal disease and undesirable conditions of periodontal tissues
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1. The patient returned with no active periodontal disease and undesirable conditions of periodontal tissues

2. Suggestions for which teeth to save, the ones to monitor closely and the ones to extract?
What influences clinician’s treatment decision making?

- Scientific evidence / knowledge
- Empirical evidence / knowledge
- Education
- Experience
- The last patient
- Litigation / complaints
- Resources
- Audit
- Payment systems
Development of prognostic indicators using classification and regression trees for survival

Predictors of tooth loss during long-term periodontal maintenance: a systematic review of observational studies

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Tsami et al. (2009) Greece, Practice-based, n=280, 16–8y
Eickholz et al./Pretzl et al. (2008) Germany, University-based, n=100, av.10y
Chambrone & Chambrone (2006) Brazil, Practice-based, n=120, 36–10y
Fardal et al. (2004) Norway, Practice-based, n=100, 11–9y
König et al. (2002) Germany, University-based, n=146, 13–8y
Matthews et al. (2001) Canada, University-based, n=335, 38–10y
McLeod et al. (1998) USA, University-based, n=100, 29–5y
McGuire & Nunn (1996 / 1991) USA, Practice-based, n=100, 16–5y
Wood et al. (1989) USA, University-based, n=63, 34–10y
McFall (1982) USA, University-based, n=100, 29–15y
Hirschfeld & Wasserman (1978) USA, Practice-based, n=600, 53–15

Age, smoking and initial tooth prognosis can be associated with tooth loss during periodontal maintenance. Considerable heterogeneity among studies does not allow definitive conclusions.
What does prosthodontists wish to obtain from periodontists?

1. The patient returned with no active periodontal disease and undesirable conditions of periodontal tissues.
2. Suggestions for the teeth to save, the ones to monitor closely and the ones to extract.
3. Opinion whether there is enough supporting bone around potential fixed bridge abutments.

Ante IH. The fundamental principles of abutments. Michigan State Dent Soc Bull 1926; 8: 14-23

The total periodontal membrane area of the abutment teeth must equal or exceed that of the teeth to be replaced. The length of the periodontal membrane attachment of an abutment tooth should be at least ½ or 2/3 of that of its normal root attachment.
Med partiell protese

Uten partiell protese

Dr. S. Kermani 2006
Experience is simply the name we give our mistakes (Oscar Wilde)

Scientific evidence / knowledge

Empirical evidence / knowledge

Resources

Audit

Payment systems

Education

Experience

The last patient

Litigation / complaints
Periodontal FDPs

- A biological rationale for splinting compromised teeth
- Highly successful with 20 years+ clinical follow-ups
- Close follow-up and excellent patient compliance

Restored 1969-1973, Göteborg University, Sweden
Reports by: Nyman & Lindhe & Lundgren 1975a,b 1976a, b, c, 1977…1984
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Pre-/Post-prosthodontic surgery interventions

Pre-prosthodontic
- Clinical crown lengthening
  - Symmetry
  - Added retention
- Pontic tissue sculpturing, enhancement
- Hemisection

Post-prosthodontic
- Crown margin exposure
- Pontic tissue sculpturing, loss / hyperplasia
- Gingival hyperplasia
Pre–/Post–prosthodontic surgery interventions

Pre–prosthodontic

- Clinical crown lengthening *
  - Symmetry
  - Added retention
- Pontic tissue sculpturing, enhancement
- Hemisection

Post–prosthodontic

- Crown margin exposure
- Pontic tissue sculpturing, loss / hyperplasia
- Gingival hyperplasia
Plan
1. Endo 11 & 21 evaluation
2. Prelim. crown prep. 11 & 21 + temp
3. Crown lengthening 11 & 21 & soft tissue correction 13-11 space
4. Temporaries
5. 3-unit FDP x-11-21
Grovbrent

Karakterisering og glansing

Dr. M. Lin 2007
Prosthesis’ attributes as risk factors for periodontal disease

- Prosthesis material
  - Degradation
- Prosthesis surface
  - Surface adhesion
  - Polishability
- Prosthesis geometry
  - Contour ↔ access
  - Margin qualities / discrepancies
  - Occlusion
  - Tissue impingement
- Patient education
Prospective cohort study 25+ yrs

Dr J Valderhaug (†1999)

Assessment of the periapical and clinical status of crowned teeth over 25 years

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ABSTRACT

Objectives: The purpose of this study was to examine radiographically changes in the periapical status and compare the clinical status of teeth with a vital pulp and root-filled teeth restored with crowns and bridge retainers during 25 years.

Methods: During 1967/68, 114 patients received prostodontic treatment by senior dental students at the Oslo Dental Faculty. In all, 291 teeth with a vital pulp and 106 root-filled teeth were restored with 158 prostheses. All root-filled teeth were restored with a cast dowel and core. The casts were made in a type-3 gold alloy, and cemented with zinc phosphate cement. Forty-six teeth were restored with crowns and 351 teeth with bridge retainers. Radiographs were taken preoperatively, immediately after operation, and

- Periodontal conditions and carious lesions following the insertion of fixed prostheses: a 10-year follow-up study. Int Dent J. 1980
- Periodontal conditions in patients 5 years following insertion of fixed prostheses. Pocket depth and loss of attachment. J Oral Rehabil. 1976
Thank you for your kind attention