BDA CONFERENCE 2016
BSSPD Early Practitioners Group

Treatment Planning Session
Chair: Peter Briggs
Our aims of this session

- To learn
- To question
- To think
- To agree to disagree
- Have some fun
- To spark interest into Prosthodontics and of course - the British Society of Prosthodontics

(membership deals available at our desk – we are a not-for-profit learned society – one of the oldest National Dental Societies)
Our aims:

- To include you the audience – you will be voting
- Voting with aid of the BDA Conference app
- The panel members have also been given the questions that you will answer
- We have much to do and go through so let’s introduce the panel
BDA CONFERENCE 2016

BSSPD Early Practitioners Group

Panelists:

Anoop Maini
Bhavin Bhuva
David Bretton
Hatem Algraffee
Phil Taylor
Rishi Patel
Tif Qureshi
Treatment Planning Case 1
# Case History

<table>
<thead>
<tr>
<th>Presenting Problems</th>
<th>Continual reduction in size of lower anterior teeth. Occasional sensitivity to cold. Regularly bites lower lip and tongue. Fractured restorations right side</th>
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<tr>
<td>Age</td>
<td>72</td>
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<tr>
<td>Medical History</td>
<td>Hypertension - Atenolol</td>
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<tr>
<td>Dental History</td>
<td>Regular dental attender Had a number of restorations and crowns in the past</td>
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Extra Oral Findings

Moderate to high lip line
## Intra Oral Findings

<table>
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<tr>
<th>OH</th>
<th>Some soft plaque associated with gingival margins</th>
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<tr>
<td>Any other findings</td>
<td>Fractured restorations UR7, LR7</td>
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<tr>
<td></td>
<td>Discolouration LL1</td>
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<td>Marginal staining adjacent to composite UL3</td>
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### Teeth Present

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<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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Fractured restorations
UR7
LR7

Generalised wear
Maxilla: UR3, UL3, UL4
Mandible: LR5 – LL5
Radiographs

- Mild generalised horizontal bone loss
- Periapical pathology associated with LL1, LL8
### Additional Information

| Diagnoses | Severe tooth wear – Aetiology to be discussed  
Chronic apical periodontitis LL1, LL8  
Fractured restorations/cusps UR7, LR7 |
|-----------|---------------------------------------------------------------------------------|
| **Treatment Options** | 1) Maintain, prevention and monitor  
2) -/P overdenture  
3) XLA LL1 vs. RCT  
4) Surgical crown lengthening LR3-LL3  
   1) Direct resin build-ups  
   2) PFM Crowns  
5) XLA: LR3 – LL3, Dental Implants |
| **Treatment Plan** | 1) XLA LL8  
2) In the maxilla, the worn teeth were built up with direct composite resin and the missing teeth were to be replaced with partial dentures/implant.  
For the purpose of this presentation, we will not discuss the details of the maxillary rehabilitation in too much detail. |
Polls – questions and options choices will be up on the screen – we want you to cast your vote. We can see your results and compare them to the views of the panel.
Q1: Do you think that a patient with such advanced tooth wear will lose vertical dimension and vertical face height?

a) Yes

b) No
Q1: Do you think that a patient with such advanced tooth wear will lose vertical dimension and vertical face height?

- Yes: David, Hatem, Rishi, Tif
- No: Anoop, Bhavin, Phil
Vertical Dimension comparison between two groups of patients - a young patient group without tooth wear and older patients with tooth Wear

Crothers and Sandham (1993)

Compared the face heights of young dentate patients in Newcastle Dental Hospital without TSL to middle aged patients with significant TSL.

Conclusion: They found no significant difference between the two groups. Why?
So dentate patients with tooth wear and natural tooth ‘stops’ do not seem to lose face height – but their teeth get shorter.

It is very rare that tooth wear is rapid enough to overcome the compensatory mechanisms.

Crothers and Sandham (1993)
Q2: In order to restore the missing tooth structure (tooth wear in the mandible), the occlusal-vertical dimension needs to be increased.

What occlusal approach would you use to restore this case?

a. Conformative

b. Reorganised, in the retruded arc of closure (centric relation)

c. Reorganised, somewhere in between the ICP and RCP.
Q2: In order to restore the missing tooth structure (tooth wear in the mandible), the occlusal-vertical dimension needs to be increased.

What occlusal approach would you use to restore this case?

Answered: 7    Skipped: 0
Q3: What types of tooth wear does this patient have?

a) Erosion + Attrition
b) Erosion + Abrasion
c) Attrition + Abrasion
d) Erosion + Abrasion + Attrition
Q3: What types of tooth wear does this patient have?

1. Erosion + Attrition
2. Erosion + Abrasion
3. Attrition + Abrasion
4. Erosion + Abrasion + Attrition

Anoop, Bhavin, David Rishi

Hatem Phil Tif
Q4: How would you manage the mandibular teeth: LR3 - LL3?

a) Overdenture
b) Direct composite build up only
c) Crown lengthening surgery + Composite
d) Crown lengthening surgery + indirect restorations (crowns)
e) Extraction of these 6 teeth and dental implants
Q4: How would you manage the mandibular teeth: LR3 - LL3?

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b) Direct composite build up only
c) Crown lengthening surgery + Composite
d) Crown lengthening surgery + indirect restorations (crowns)
e) Extraction of these 6 teeth and dental implants

Phil
Anoop
Hatem
Tif
Bhavin, David
Rishi
Q5: Crown lengthening: what technique would you use to lengthen the teeth if you thought it necessary: LR3 - LL3?

a) Conventional surgical with bone removal (bur or piezon ultrasound)
b) Electro-surgery / Radio wave surgery – no bone removal
c) Laser of other soft tissue cutting device / tool
Q5: Crown lengthening: what technique would you use to lengthen the teeth if you thought it necessary: LR3 - LL3?
Recent BSSPD Webinars that will be very useful on this subject

BSSPD Webinar 2014/5

The programme of webinars was as follows:

- **17th September 2014 - Sophie Watkins**
  Making alterations to Vertical Dimension and Occlusal relationships in Prosthodontics - A Practical Guide

- **30th October 2014 - Phil Taylor**
  Occlusion / Articulators / TMJ / Jaw Registrations

- **27th November 2014 - Dean Barker**
  'Cosmetic Zone' Treatment - Challenges and Practical Solutions

- **16th December 2014 - Mital Patel**
  Practical management of the worn dentition with case examples

- **15th January 2015 - Ulpee Darbar**
  The Prosthodontic - Periodontal Interface

- **25th February 2015 - Theresa Leung and Claire Morgan**
  Restorative Dentistry - Caring for the Cancer Patient

- **23rd March 2015 - Shiyana Eliyas**
  The clinical and practical implications of Endodontic / Prosthodontic interface

- **23rd April 2015 - Ahmed Al-Khayatt**
  What I have learnt from patients that I have treated through in my career

Prosthodontics; the future is digital.

Thursday 6th - Friday 7th April 2017, 155 Bishopsgate, London

Further details coming soon
Q6: Crown Lengthening

When do you decide that a worn tooth is too short to support a conventional crown and that it should be either reduced for use with an over-denture abutment or extracted?

- a) <1mm crown height
- b) 2mm crown height
- c) 3mm crown height
- d) 4mm crown height
- e) 5mm crown height
Q6: Crown Lengthening

- <1mm crown height: Phil
- 2mm crown height: Bhavin, David, Rishi
- 3mm crown height: Anoop, Tif
- 4mm crown height: Hatem
Treatment options

- Recurrent caries on UL6, UR3 and UR7.
- Defective restoration margins on LL5 and UR6.
- Generalised extensive tooth surface loss.
  - Restore teeth with conformative approach and monitor TSL.
  - Restore teeth at increased OVD and provide canine guidance.
  - Restore anterior teeth only at increased OVD and allow posterior teeth to come into occlusion by intrusion of anteriors and supraeruption of posteriors.

Sorensson and Engelman (1990) Coronal tooth structure above the crown margins increased the # resistance.
Q7: Crown lengthening:

If crown lengthening was considered in the mandibular anterior area, how long would you wait before you restore the teeth with definitive indirect restorations?

a) Immediately
b) 3 months
c) 6 months
d) 9 months
e) 12 months
f) 15 months
If crown lengthening was considered in the mandibular anterior area, how long would you wait before you restore the teeth with definitive indirect restorations?

- Immediately: Bhavin, David, Phil
- 3 months: Anoop, Hatem, Rishi Tif
- 6 months: Anoop, Hatem, Rishi Tif
- 9 months: Anoop, Hatem, Rishi Tif
- 12 months: Anoop, Hatem, Rishi Tif
- >12 months: Anoop, Hatem, Rishi Tif

Q7: Crown lengthening:
Q8: Dental Implants:

If the teeth (LR3 - LL3) were extracted and replaced / restored with dental implants how long would you leave the sockets to heal before placing the implants?

Answers:

a) Immediate placement / delayed loading
b) Immediate placement and immediate loading
c) 6-8 weeks
d) 12 weeks and more
If the teeth (LR3 - LL3) were extracted and replaced / restored with dental implants how long would you leave the sockets to heal before placing the implants?

Answers:

a) Immediate placement / delayed loading
   - Anoop, David, Tif

b) Immediate placement and immediate loading
   - Hatem, Phil

c) 6-8 weeks
   - Bhavin, Rishi

d) 12 weeks and more
Q9: Dental Implants

If the teeth (LR3 - LL3) were extracted and dental implants used to restore this case, how many implants would you place to replace the 6 missing teeth (assume that there is sufficient bone available)

a) One  
b) Two  
c) Three  
d) Four  
e) Five  
f) Six
Q9: Dental Implants

If the teeth (LR3 - LL3) were extracted and dental implants used to restore this case, how many implants would you place to replace the 6 missing teeth (assume that there is sufficient bone available)

- **One**
  - Rishi

- **Two**
  - Anoop, Phil, Tif

- **Three**
  - Bhavin, David, Hatem

- **Four**

- **Five**

- **Six**
Q10: Composite Restorations

If composite was used to restore the tooth wear in the mandibular anterior teeth, how long would you anticipate the composite restorations to survive (survival) in function?

a) 1 - 2 years
b) 2 - 4 years
c) 4 - 6 years
d) 6 - 8 years
e) 8 - 10 years
Q10: Composite Restorations

If composite was used to restore the tooth wear in the mandibular anterior teeth, how long would you anticipate the composite restorations to survive (survival) in function?

- **1 - 2 years**: David
- **2 - 4 years**: Bhavin, Rishi
- **4 - 6 years**: Hatem, Phil
- **6 - 8 years**: Anoop, Tif
- **8 - 10 years**:
Evidence and Literature
Survival of Composite Resin in TSL?

Why should I join BSSPD?
By joining BSSPD you are becoming part of a global group of 500 dentists, doctors, scientists and other dental care professionals who are interested in Prosthodontics. The society is one of the oldest in the U.K. and our members have always been at the forefront of scientific, clinical and academic dentistry.

Our membership fee is competitively priced...
- £110 per year for ordinary membership.
- £50 per year for postgraduates, young practitioners (qualified for three years or less), and StrRs/SpRs.
- £25 per year for undergraduate students.

Membership entitles you to...
- Ordinary membership of the society
- Subscription to the European Journal of Prosthodontics and Restorative Dentistry
- Access to the members’ area of our website, discussion forums and blogs
- Reduced rates to our annual conference
- Free access to our online webinars
- Submit abstracts for society meetings
- Be listed on our patient searchable member’s listings

Join us!
Joining the BSSPD brings you into contact with dental professionals interested in all aspects of Prosthodontics. As the oldest UK prosthodontic society, we can offer a wealth of information, training, education and support for anyone wanting to improve their knowledge and skills in prosthodontics.

Mike Fenlon
President 2016/17
Results: The results indicated that the median survival time for composite resin restorations was 5.8 years and 4.75 years for replacement restorations when all types of failure were considered. BDJ 2011; 211: E9
The results of the present study suggest that direct composite restorations bonded to the worn anterior mandibular dentition to have an approximate survival of 85% at the 7-year follow up. Approximately 53% of patients experienced survival of all of their restorations. Pre-operative circumferential preparation did not influence restoration survival, patient satisfaction or other clinical variables (restoration staining, marginal discolouration, shade match, surface roughness and marginal adaptation). The time taken to initially build-up the restorations was shown to be statistically significant with a longer procedural time meaning less chance of the restoration being present at 7 years.
Al-Khayatt et al 2013
level II evidence


Direct composite restorations for the worn mandibular anterior dentition: a 7-year follow-up of a prospective randomised controlled split-mouth clinical trial.

Al-Khayatt AS¹, Ray-Chaudhuri A, Poyser NJ, Briggs PF, Porter RW, Kelleher MG, Eliyas S.

no biological complications for the teeth, supporting periodontium or TMJ apparatus. The placement of these restorations provided an improvement in the aesthetics of the teeth, a reduction in the concern over the longevity of the worn lower anterior teeth, and improvements with regard to sensitivity experienced with hot or cold foods or drinks. Marginal breakdown was the most frequently recorded clinical complication. Thus, for the majority of patients, the restorations offered a high degree of patient satisfaction and required an acceptable level of maintenance in the 7-year follow-up period.
Occlusion and the use of direct resin restorations to manage TSL (2015)

The survival of direct composite restorations in the management of severe tooth wear including attrition and erosion: A prospective 8-year study

A. Milosevic\textsuperscript{a,}\textsuperscript{*}, G. Burnside\textsuperscript{b}

\textsuperscript{a} Department of Restorative Dentistry, Liverpool University Dental Hospital, Pembroke Place, Liverpool, Merseyside L3 5PS, UK
\textsuperscript{b} The University of Liverpool, Dental Research Wing, Daulby Street, Liverpool, L69 3GN, UK
1010 restorations placed in 164 patients
71 of the 1010 restorations failed during follow-up. 5.4% failure in first year – We need more of this type of research from primary care please

ABSTRACT

Objectives: Survival of directly placed composite to restore worn teeth has been reported in studies with small sample sizes, short observation periods and different materials. This study aimed to estimate survival for a hybrid composite placed by one clinician up to 8-years follow-up.

Methods: All patients were referred and recruited for a prospective observational cohort study. One composite was used: Spectrum® (DentsplyDeTrey). Most restorations were placed on the maxillary anterior teeth using a Dahl approach.

Results: A total of 1010 direct composites were placed in 164 patients. Mean follow-up time was 33.8 months (s.d. 27.7). 71 of 1010 restorations failed during follow-up. The estimated failure rate in the first year was 5.4% (95% CI 3.7–7.0%). Time to failure was significantly greater in older subjects (p = 0.005) and when a lack of posterior support was present (p = 0.003). Bruxism and an increase in the occlusal vertical dimension were not associated with failure. The proportion of failures was greater in patients with a Class 3 or edge-to-edge incisal relationship than in Class 1 and Class 2 cases but this was not statistically significant. More failures occurred in the lower arch (9.6%) compared to the upper arch (6%) with the largest number of composites having been placed on the maxillary incisors (n = 519).

Conclusion: The worn dentition presents a restorative challenge but composite is an appropriate restorative material.

Clinical significance: This study shows that posterior occlusal support is necessary to optimise survival.

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Q11: Composite restoration

How would you build-up composites restorations for the anterior mandibular teeth?

a) Direct – without a diagnostic wax-up
b) Direct / with reference to diagnostic wax-up
c) Direct with reference to a diagnostic direct composite mock up (without etch)
d) Direct with use of a silicone or other template constructed from a diagnostic wax up
e) I would use indirect composite / ceramic restorations
Q11: Composite restoration

How would you build-up composites restorations for the anterior mandibular teeth?

a) **Direct – without a diagnostic wax-up**
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d) **Direct with use of a silicone or other template constructed from a diagnostic wax up**
e) I would use indirect composite / ceramic restorations
Q12: Completion of Treatment

What form of protective splint would you recommend for this case on completion of their treatment

a) Soft mouth guard
b) Michigan splint
c) Tanner appliance
d) Semi-flexible mouth guards
Q12: Completion of Treatment

What form of protective splint would you recommend for this case on completion of their treatment

- Soft mouth guard
- Michigan splint
- Tanner appliance
- Semi-flexible mouth guards

Bhavin, Hatem, Phil, Rishi
Anoop, David
Tif
Probably only beneficial if parafunction present

However, there is NO Stat difference that SSs are any more effective at reducing TMD pain & symptoms than most other active treatments

Zaid Al-Ani et al (2009)
Post Operative Photos / Radiographs

Case by Paul King and James Ban
Post Operative Photos

Following Crown Lengthening Surgery

Following Direct Composite build- ups
Post Operative Photos

Pre op Surgery

Post op Surgery

Post op Composites

1 year post op
Post Operative Photos

Level I or II complexity care?
Would you have done more in the upper arch?