Case 3
Mrs JG

Andrew Shelley
October 2007
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1 One Page Case summary

This case history describes the treatment of Mrs JG who had severe erosion of her posterior teeth. This arose from daily vomiting due to liver disease over a period of four years. Mrs JG has since had a liver transplant and this problem has stopped. Mrs JG was left with total loss of morphology of many of her posterior teeth. She complained that she could not find a comfortable bite as her teeth were crumbling away. She was also dissatisfied with the appearance of her crowned upper incisor teeth and the worn lower incisors. Mrs JG had consulted another practitioner who planned to place metal ceramic crowns on all her remaining teeth. This had been rejected on the basis of cost and Mrs JG sought a more realistic solution.

1.1 Key clinical features

- Loss of morphology of most posterior teeth, very severe erosion on upper premolars and canines
- Difficulty in finding a comfortable centric occlusion
- Poor appearance of upper anterior crowns with visible margins
- Wear of lower anterior teeth causing dissatisfaction with appearance.

1.2 Care provided

The approach was to reorganise the occlusion to centric relation as minimally as possible. There was already substantial loss of tooth tissue. Posterior resin-bonded cast metal restorations\(^1\) were selected for the molar teeth which had short clinical crown heights. Metal ceramic crowns were selected to replace the existing upper anterior crowns and to restore the very eroded upper canines and premolars. The candidate saw no reason to prepare LL5 to LR5.

- Recording in centric relation
- Diagnostic wax up of upper premolars and canines
- Provisional directly placed composite restorations on upper premolars and canines to reorganise to centric relation. Template from wax up was used.
- Refine occlusion and aesthetics on provisional composites
- Resin-bonded cast metal restorations on all molars
- Metal ceramic crowns UL5 to UR5
- Bonded composite restorations to improve appearance of lower anterior teeth.

1.3 Outcomes

- There was a period of adaptation to the new occlusion.
- Mrs JG now has a stable occlusion and is very pleased with the cosmetic results.

1.4 Plans for future care

- Mrs JG will now be referred back to her practitioner for continuing care.
- It will be necessary to monitor the vitality of the extensively damaged and then prepared teeth.

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2 Examination and assessment proformas and correspondence

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## New Patient Examination

<table>
<thead>
<tr>
<th>Medical history summary</th>
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<tr>
<td>Social history summary</td>
<td>V. busy. mant pubs.</td>
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<tr>
<td>Dental history summary</td>
<td>1 Seal attendee 12 yrs!</td>
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</tbody>
</table>
| Blood pressure & pulse  | BP \[
\begin{array}{c}
41 \\
69
\end{array}
\] |
| Extra oral examination  | NAD                   |
| TMJ & muscles of mast   | NAD                   |
| Soft tissue examination:| NAD                   |
|                         | ICC Y/N               |
| BPE                     | 2/2/2                  |
| Hygienist prescription  | Y/N                   |
| Dental charting carried out | Y/N              |
| If teeth missing, how were they lost? | For CF/MO. |
| Dentures worn           | No.                   |
| Occlusion               | Class II              |
|                         | Class III div I       |
| Skeletal pattern        |                      |
| Incisor relationship    | Left 12               |
| Guidance                | Right Canine          |
|                         |                       |
| Initial defective contact| 8\%Vh               |
| Tooth wear              | Severe - gastric reflux problems (see photo) + c/ahrs. |
| Special tests           |                        |
| Radiographs             | 2 x BVs Y/N           |
|                         | P/As X8               |
| Study casts             | Y/N                   |
| Other special tests     |                       |

*See reverse of card for notes of patient discussion*
## Section 2 – Examination proformas

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Patient name:</td>
<td></td>
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<td>DOB:</td>
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### Medical observations:

Update:

### Susceptibility Assessment

<table>
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<tr>
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<th>Resistant</th>
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<tbody>
<tr>
<td>High Moderate Average Moderate High</td>
<td>Date</td>
<td>11/9/07</td>
</tr>
<tr>
<td>High Moderate Average Moderate High</td>
<td>Date</td>
<td>1/1/07</td>
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</tbody>
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### Prescription

#### Periodontal Category:

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<th>1b</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

#### Observations

Submitted with 31/12 please.

#### Signed: Date:

11/9/07

#### Periodontal Category:

<table>
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<th>1b</th>
<th>2</th>
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</table>

#### Observations

#### Signed: Date:

#### Periodontal Category:

<table>
<thead>
<tr>
<th>Category</th>
<th>1a</th>
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<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

#### Observations

#### Signed: Date:
Section 2 – Examination proformas

Medical History Form

Title: [T13]  Surname: [T1]  First name: [T1]  Occupation: [Homeless Worker]
Your doctor's name: [Lynne Kees Hayward]
Your doctor's address: [1813 7th St]  [130 3rd St]

Please tick the yes or no box

Questions

A. Are you:
1. Having or receiving any treatment from a doctor? [V]  
2. Taking or using any medicine, pills, tablets, inhalers, ointments, injection or any other drug? [V]  
3. Allergic to penicillin or any other drug or substance? [V]  

B. Have you:
1. Had rheumatic fever or chorea (St Vitus dance)? [ ]  
2. Had pneumonia, liver, kidney disease or hepatitis? [ ]  
3. Ever been told you have a heart murmur or heart problem? [ ]  
4. Had any blood pressure problems? [ ]  
5. Had any blood tests, incisions etc.? [ ]  
6. Had a bad reaction to a local or general anaesthetic? [ ]  
7. Had a joint replacement? [ ]

C. Do you:
1. Have a pacemaker or have you had any form of heart surgery? [ ]  
2. Suffer from hay fever, asthma, arthritis or any other allergy? [ ]  
3. Have chest problems? [ ]  
4. Have fainting attacks, paddiness, blackouts or epilepsy? [ ]  
5. Have diabetes or does anyone in your family? [ ]  
6. Suspect easily or following extraction surgery or injury have you or your family bled so as to cause you to be worried? [ ]
7. Carry a warning card? [ ]
8. Smoke? [ ]

D. Female patients
Are you likely to be pregnant? [ ]
Are there any other aspects of your health that your dentist needs to know?

Please sign below:

Signature of patient/patient's carer: [ ]
Date: [19 3 01]

↓↓↓ This part of the form for dentist's use ↓↓↓

History

- [notes of medical history]

[Signature of dentist]

[Date]
Mrs J
11 Street
Denton
Manchester
M34

28th June 2007

Dear

Many thanks for your enquiry about dental work at our practice. This letter is to summarise our discussion and outline the options for treatment.

Treatment need

You are concerned about the appearance of your upper front teeth which have been crowned. There are black lines around the edges of the crowns where they meet the gum. You feel that your back teeth are crumbling away and that your bite feels wrong. Lastly you are concerned that the lower front teeth are broken and chipped.

We have discussed the gastric reflux which has led to the wear on your teeth. This was the result of liver disease which, I am pleased to hear, has now been successfully treated. This has meant that the gastric reflux has now stopped.

What are the difficulties with this case?

This is a difficult case because your whole bite has to be re-established. There will be a period of acclimation to the new bite. However you had told me that your bite felt wrong before treatment. I will set your new bite into a position which dentists call “centric relation”. This will be the most comfortable and relaxed position. Any other position would mean that the jaw joints would be out of place and the muscles attached to the jaw would be strained to some degree.

What are the limitations?

The appearance of teeth is a personal judgement and therefore a matter of opinion. We had discussed the use of temporary crowns for the upper front teeth so that we can adjust these and experiment with the appearance before committing to permanent crowns. However you had rejected this option on the grounds of additional cost. This means that there is a degree of risk in terms of the appearance of these crowns. However I anticipate a dramatic improvement in the appearance of the upper front teeth by eliminating the black lines. I sincerely hope that you will be pleased with the result and it is certainly my intention that this is so.

I propose to fit so called “gold caps” to the molar teeth. This is a minimally destructive option which we will use to restore the bite of these teeth. I have enclosed an article...
from a dental journal which explains this technique. Although much of it is in dental jargon I think you will be able to understand the gist of it and thus the technique that we propose. One problem with these “gold hats” is that temporary dressings are notoriously difficult. This is because the gold is very strong in thin sections but temporary materials are not. This means that temporaries can break very easily. The problem will be solved immediately the permanent ‘gold hats’ are fitted. You cannot draw any conclusions from the feel, appearance or performance of the temporaries.

Of course the molar teeth will of a gold appearance. Whilst this is a less than natural appearance it is by far the least destructive and we agreed that this was the most suitable option.

In your natural bite position “centric relation” the teeth are very close together on the right side. I will decide on the day of preparation if there is space in which to place the “gold hats”. If this is not possible I will discuss this with you and in all probability place white fillings instead.

What options have we discussed?

We discussed a number of options to restore your teeth before agreeing on a final treatment plan. Amongst these options were different crown materials such as all porcelain and a period of wearing provisional crowns before fitting permanent crowns for the upper front teeth.

You had discussed porcelain bonded to metal crowns for all of your teeth with a previous dentist. We agreed that this was unnecessarily destructive and agreed on a treatment plan that would restore your teeth whilst preserving the maximum amounts of remaining tooth.

We made a number of compromises on the grounds of cost. These included the use of metal bonded to ceramic crowns rather than all porcelain. We also agreed that we would not use provisional crowns to establish the appearance of the upper front teeth. Instead we would make our best estimate of a satisfactory appearance. We agreed that we would largely keep the shape of the existing teeth whilst eliminating the black lines. I would also expect that the crowns would look more natural than the rather opaque crowns which you have at the moment. We had also discussed the option of tooth whitening for the lower teeth which are not going to be crowned.

Your treatment plan

I propose the following:

- Replacement of large amalgam fillings on the upper molars in preparation for the “gold hats”
- Recording of the new bite in “centric relation”
- Build up of upper canine and premolar teeth to the new bite.
- 8 “gold hats” to restore the bite on the molar teeth
- Porcelain bonded to metal crowns for the upper canine and premolar teeth.
- Repair of lower front teeth with white filling material
- New crowns for the 4 upper front teeth in porcelain bonded to metal
How long will the treatment last?

The average longevity of crowns and gold work would be expected to be around 10 to 12 years. Although crowns and gold work may well last considerably longer than this I cannot promise that they will last any longer than 10 to 12 years. We guarantee our work for a period of at least one year. During this time any failure of our dental work will be rectified free of charge.

How much will it cost?

I have set out our fees for this work in the enclosed quotation. We ask that payment is made for treatment at the completion of each stage.

Refunds

Janet, I will do my professional best to provide the best possible result for you within the limitations of your clinical situation. If the result does not meet your expectations this will be due to the limitations outlined above. Accordingly refunds are not possible. However if problems arise following treatment then I will of course be happy to continue working with you perhaps modifying or even in rare cases redoing dental work at no extra cost to yourself.

I would be most grateful if you would sign this letter to confirm that you have read and understood its contents and return it to me.

I look forward to working with you in providing the improvements which you have requested. If you have any queries arising from this letter or require further information please do not hesitate to contact me.

I would be most grateful if you would sign this letter to confirm that you have read and understood its contents.

With kind regards,

Andrew Shelley BDS MFGDP(UK) DPDS MGDS RCSEd FFGDP(UK)

I have read and understood the above letter and I understand all the explanations I have received. I agree to the treatment outlined above and to the professional fees stated.

Signed ………. ………. ……….

Mrs J
3 Special investigations carried out

1. All worn teeth very sensitive to probing and cold air spray
2. Bitewing radiographs
3. Periapical radiographs
4. Study casts in centric relation
5. Diagnostic wax up of upper molars and premolars
4 Results of special investigations

4.1 Radiographic findings

Bitewing radiographs

- **Periodontal**
  - Little alveolar bone loss.

- **Caries**
  - None noted

- **Endodontic and periapical**
  - No evidence of periapical pathology.

- **Restorations**
  - No overhangs or deficiencies of existing crowns UL2 to UR2

- **Other**
  - Extensive wear noted

4.2 Results of other special investigations

Study casts in centric relation showed the initial deflective contact and jaw relationship. This suggested that restoration of the patient to centric relation would lead to a loss of contact on the incisor teeth.
5 Initial Radiographs
6 Radiographs During Course of Treatment

None
7 Diagnosis

1. Extensive tooth erosion due to daily gastric reflux.

2. Patient unable to find a comfortable centric occlusion

3. Poor appearance of upper anterior crowns due to visible margins and opaque porcelain work

4. Chipped and worn lower anterior teeth leading to dissatisfaction with appearance.
8 Discussion of Treatment Options

8.1 Treatment objectives
Reorganisation to centric relation with comfortable intercuspatation
Restoration of eroded teeth
Replacement of upper anterior crown work
Improvement of appearance of lower anterior teeth
Minimal intervention where possible

8.2 Patient’s attitude
Mrs JG was very keen to proceed with treatment although she was a little anxious. We had discussed the possibility of sedation but this was considered unrealistic in terms of the additional cost and the number of appointments which were necessary. Whilst Mrs JG was prepared to spend money to restore her teeth the cost of treatment was still an issue and some compromises had to be made to keep the course of treatment realistic for her. For example we had discussed all anterior porcelain crowns and tooth whitening. We had also discussed the provision of provisional anterior crowns so that the appearance of the definitive crowns would be more predictable. These options were rejected on grounds of cost.

Mrs CLJ had no active caries and a satisfactory periodontal condition.

8.3 Discussion of possible alternative treatment plans
The rationale for this course of treatment was to solve the patients problems as minimally and as simply as realistically practical. Other options considered were as follows:

**Full mouth metal ceramic crowns**

This option had been offered by another practitioner and Mrs JG had been given a quotation for this. Both the patient and I felt that such an option was unrealistic, unnecessary and of unacceptably high risk. The crown height of the posterior teeth was insufficient to allow for retention and resistance form for such restorations. Furthermore it was felt that further damage to already compromised teeth should be avoided where possible. We agreed on posterior resin bonded cast metal restorations which would be considerably more conservative. However the patient did require some persuasion as she had already been offered metal ceramic crowns by another practitioner. Her preference was for aesthetic restorations. A fairly lengthy discussion took place before the patient understood the problems with this. Even then, in the end, I think the patient just decided to trust my opinion.
Restoration in centric occlusion

Thus was not an option as the loss of morphology of the posterior teeth meant that a comfortable, reproducible centric occlusion did not exist.

Relative axial tooth movement

This technique is applicable to localised areas of tooth wear. This tooth wear was both generalised and severe. It was felt that there was no option but to reorganise the occlusion.

Use of stabilisation splint

The use of a stabilisation splint was considered for two reasons. Firstly a stabilisation splint could have been used as a “training appliance” in order to find a repeatable centric relation jaw relation. However it was found that centric relation could be reliably found by manipulation. The second reason to use a stabilisation splint would be to test the comfort of the raised occlusal vertical dimension. This option was rejected firstly because the stabilisation splint would necessarily have to raise the OVD by more than that required for placement of restorations. Secondly it is the candidate’s experience and that of authors in the dental literature that a modest increase in OVD is rarely if ever intolerable for a patient. In addition the plan included a period of provisional composite restorations which were in themselves reversible.

Designing and executing the new occlusion

A number of options existed for the design and execution of the new occlusion. Firstly a stabilisation splint could have been made to establish a reproducible centric relation. This was not used for the reasons discussed above. Secondly provisional crowns could have been made which were then refined in the mouth. However this would have committed the patient to having crowns whatever the outcome of the provisional phase. This was not considered necessary when a minimally invasive, reversible and adjustable option was available.

It was agreed to design and execute the new occlusion on bonded composite restorations. This would also have the advantage of giving the patient an immediate cosmetic improvement. The first stage was to wax up the restorations on study casts mounted in centric relation. An acrylic template was then made on the casts so that the composites could be shaped easily in the mouth to the new occlusal contour. No preparation of the teeth was carried out.

Crown materials

All porcelain materials were considered for the upper anterior teeth. These were rejected on grounds of cost. The patient needed a good deal of work and wished to

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keep the costs down as far as possible. Whilst all porcelain crowns would possibly be more reliable in terms of appearance the candidate was confident that a good result could be achieved with the use of metal ceramic crowns.

For the extensively damaged upper premolars and canines the choice of metal ceramic seemed ideal. The erosion had already self-prepared knife edge margins palatally. Whilst preparation to a shallow chamfer for a metal margin would be minimal, all porcelain crowns would have required a deeper preparation of an already heavily compromised tooth.

**Appearance of lower anterior teeth**

It was felt that a satisfactory appearance could be achieved by the minimally destructive option of bonded composite restorations and this was provided. Crowns or veneers were considered to be unnecessarily destructive as they always are for small lower anterior teeth.
9 Treatment plan

1 Replacement of large undermined amalgam restorations on upper molars in preparation for bonded restorations and to gain the confidence of the patient.
2 Study casts and centric relation recording
3 Diagnostic wax up and acrylic template
4 Bonded composite restorations upper premolars and canines for design and execution of the new occlusion.
5 Posterior resin bonded cast metal restorations to restore molar teeth and conform with new occlusion
6 Metal ceramic crowns upper canines and premolars
7 Metal ceramic crowns upper incisors
8 Bonded composite restorations to improve appearance of lower anterior teeth.

9.1 Reassessment and maintenance 6 months

1 Assess comfort, function and aesthetics of restored teeth
2 Monitor the vitality of the extensively damaged and then prepared teeth.

9.2 Refer back to practitioner for continuing care
10 Photographs

On presentation 19/3/07
Complete loss of palatal cusps of upper premolars
Section 10 – Photographs

Poor appearance of upper anterior teeth
19/3/07

Upper teeth severely eroded but lower teeth relatively intact
19/3/07
Bonded composite build ups of upper canines and premolars
Occlusion refined in the mouth 22/5/07
Posterior resin bonded cast metal restoration preparations on posterior teeth.
Work delivered on articulator
Case completed showing occlusion left and right sides 25/9/07
Gingival inflammation due to placement of lower anterior composites at same visit
Case completed 25/9/07
Section 10 – Photographs

Canine guidance established

Composite restorations on lower anterior teeth just finished
Even guidance in protrusion
Before and after photographs
11 Reflective Commentary

This case shows the treatment of a patient on referral from another practitioner. Mrs JG had been extremely ill with a life threatening condition and the candidate was aware that she needed to be handled very carefully.

Mrs JG complained that her bite was collapsing, her teeth crumbling away and that the appearance of her front teeth was unacceptable.

The patient had already been previously sent to another referral practice for consideration of her dental problems and had been presented with the option of full mouth metal ceramic crowns. The patient rejected this on the grounds of cost but the candidate felt that this was also unnecessarily destructive and inappropriate. Therefore from the professional point of view it required careful handling.

Mrs JG was anxious and the option of sedation was discussed. However this was felt to be unrealistic given the number of appointments that would be required and the extensive work to be carried out. It would also have added considerably to the cost. Instead it was agreed to carry out some simple treatment first in order to gain the patient's confidence. To this end the undermined amalgam restorations on the upper molars were replaced. This not only made preparation for the cast restorations easier but added greatly to the patient's confidence in our treatment.

The most difficult part of the treatment plan technically was the execution of the new occlusion on the composite restorations on the upper premolar and canine teeth. However this gave the patient an instant cosmetic improvement and following this it was a matter of conforming to the newly established occlusion. By having provisional restorations in composite it was possible to have a secure yet reversible method of executing the new occlusion. Two appointments were made following this to refine the occlusion and aesthetics. Refinements to the occlusion were made as new restorations were fitted and at the final appointment.

Another difficulty was the temporisation of the posterior resin bonded restorations. Since the preparations are to accommodate gold which is strong in thin section, other materials fail very easily. The best solution was found to be an overbuilt “platform” of composite which extended buccally and lingually as far as possible. Even so there were difficulties with temporisation during this stage.

The treatment plan order was changed later because the patient especially wanted to have her upper anterior crowns replaced before a family wedding. Although this originally planned to be done after the premolars and molars this was not considered essential and so the replacement of the upper anterior crowns was brought forward.

One area of concern was that it was not possible to design contact between the incisors in centric relation. This was possible for the patient in her adopted occlusion before treatment. However it was felt that there was no choice but to reorganise to centric relation and the patient was made aware of this problem in advance. She did have some slight speech problems initially but these quickly resolved. Alternatives would have been to overbuild the upper anterior crowns palatally or to give an unreasonably long area of freedom in centric occlusion. Both these solutions were
considered impractical. Mrs JG does pick up incisal guidance in protrusion and this was considered an acceptable outcome. It was felt entirely possible that when the morphology of the posterior teeth existed that there may not have been contact between the upper and lower incisors. It may have been that the incisal contact demonstrated initially was simply the result of an adopted posture to achieve maximal tooth contact.

The restorations were as minimal as realistically possible. However there has inevitably been some preparation of the teeth and they were of course extensively damaged beforehand. It will therefore be important to be vigilant about the possibility of pulpal inflammation or non vitality in the future.

I am pleased to report that Mrs JG is delighted with her new teeth. She functions very well and she tells me that she now smiles with confidence.
12 Outline of treatment visits and copies of contemporaneous notes

Visit 1  19/3/07 – Initial consultation, radiographs, study casts
Visit 2  3/4/07 – Treatment planning discussion
Visit 3  17/4/07 – Posterior composite restoration UR7
Visit 4  4/5/07 – Posterior composite restoration UL7
Visit 5  9/5/07 – Centric relation recording and new study casts
Visit 6  22/5/07 – Composite build ups upper premolars and canines
Visit 7  29/5/07 – Occlusion and aesthetics refined
Visit 8  11/6/07 – Occlusion and aesthetics refined
Visit 9  20/6/07 – Cast restoration preparations left side
Visit 10  26/6/07 – Temporary restorations recemented
Visit 11  29/7/07 – Discussed patient’s worries about treatment plan
Visit 12  3/7/08 – Cast restorations cemented left side
Visit 13  11/7/07 – Cast restoration preparations right side
Visit 14  10/8/07 – Crown preparations upper incisors
Visit 15  21/8/07 – Crowns fitted upper incisors
Visit 16  24/8/07 – Crown preparations UR5, UR4, UR3
Visit 17  3/9/07 – Crowns fitted UR5, UR4, UR3
Visit 18  11/9/07 - Crown preparations UL5, UL4, UL3.
Visit 19  11/9/07 - Hygienist appointment.  Scaling and polishing, OHI
Visit 20  21/9/07 - Crowns fitted UL5, UL4, UL3.  UL5 sent back for adjustment
1913/07
Ref: From Mr. Bootle.
Pr: requires second opinion on or needed.
Pt. problems & her tooth recorded - see sheet in chart.
NP: Examination
Green card completed.
Photographs taken
2 bit.
8 PA x-rays
MT: Imps & alginate for study casts.
Ref: 1/2 consult 2/32

3/4/67
II. Discussion,
MT: happy & suggestion
and conservative approach.
Pt. asked about sedation,
MT advised taking it
1 slowly & building up
confidence. MT: need
for sedation.
Start & carry out 10/3/67
MT to get written quote
for next visit & cement.
Ref: II & IV
n/c}

31
Section 12 – Visits outline & notes

4.9.07
Pt. given quotation.
LA given 1 @ 2.2ml 240 lig. adren.
L'incisional - 6/0 rev. s/s iron.
Bite checked & artic paper.
Ref: 4.12 jaw registration.

9.9.07
CR recorded & green stick + memorex.
1 + 1 Imps taken for new study casts.
Ref: 2hr. Apt (comp. build up).

22.11.07
Pt. requests W4 - 22ml 12% lig. spec. given.
5431535 comp. build up.
2 Imps + 12 filler + flow.
Rec: adjusted.
Next Apt made.
<table>
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<th>Date</th>
<th>AM/PM</th>
<th>Notes</th>
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<tr>
<td>29/15/07</td>
<td>AM</td>
<td>View pt reports some discomfort by incision adjusted further &amp; artic paper. Photos taken. Ref 11/4 View 1/52</td>
</tr>
<tr>
<td>11/6/07</td>
<td>AM</td>
<td>View pt reports bite now more comfortable. Final adjustments made to O/C &amp; artic paper. Ref 2 hr apt</td>
</tr>
<tr>
<td>20/6/07</td>
<td>PM</td>
<td>DB +2-2 ml 2% lidocaine &amp; spec. LA +1-1 2-2 ml Novocain B1</td>
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<tr>
<td></td>
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<td>167 temps (comp #2) made &amp; cemented. 2 temp bond. O/C checked &amp; adjusted. Ref 1 1/2 hr pt</td>
</tr>
<tr>
<td>26/6/07</td>
<td>AM</td>
<td>New temp made. #2 flaxen &amp; temp bond for any action. O/C checked. Ref #14 apt to discuss bite – Fri lunch time?</td>
</tr>
</tbody>
</table>
### Section 12 – Visits outline & notes

<table>
<thead>
<tr>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/7/07</td>
<td>10B 1/2 1x2.2mm UG Spe. Anno 1A Le 1x2.2mm Lg Spc. Le 178 Gold onlays fitted. 67 Panavia 2100. Adjusted.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 July 2007</td>
<td>2 hr Prep.</td>
</tr>
<tr>
<td>1/2 hr  #1</td>
<td>2 hr Prep. 10 Aug 10/30</td>
</tr>
<tr>
<td>1 hr  #1</td>
<td>1 hr 3/1 21 Aug 3/30</td>
</tr>
<tr>
<td>2 hr Prep.</td>
<td>24 Aug 2 Pm</td>
</tr>
<tr>
<td>1 hr  #1</td>
<td>3 hr 3/1 3 Sept 3/15</td>
</tr>
<tr>
<td>2 hr Prep.</td>
<td>11 Sept 3/15</td>
</tr>
<tr>
<td>1 hr  #1</td>
<td>21 Sept 3 Pm</td>
</tr>
<tr>
<td>2 hr C B</td>
<td>25 Sept 3:30</td>
</tr>
<tr>
<td>Hug 4907</td>
<td>340</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/7/07</td>
<td>1P6 X 2.2mm 27 UG Spe.</td>
</tr>
<tr>
<td>1A X 2.2mm</td>
<td>27 Lg Spe. 87</td>
</tr>
<tr>
<td>76 gold onlay prep</td>
<td></td>
</tr>
<tr>
<td>n+1 Imp &amp; P Cal matrix + chronograph memory recorded + face bow recorded.</td>
<td></td>
</tr>
<tr>
<td>Temp made &amp; AB taken + cemented &amp; temp band.</td>
<td></td>
</tr>
<tr>
<td>Wc checked + adjusted. 4/0 spon to cold 167.</td>
<td></td>
</tr>
<tr>
<td>Next Qtr 1500. Alumina applied.</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Notes</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>23/7/07</td>
<td></td>
</tr>
<tr>
<td>16.22 ml. 2% lidocaine</td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td></td>
</tr>
<tr>
<td>21.22 ml. 2% lidocaine</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
</tr>
<tr>
<td>7.61</td>
<td></td>
</tr>
<tr>
<td>gold amalgam fitted</td>
<td></td>
</tr>
<tr>
<td>Panavital 21</td>
<td></td>
</tr>
<tr>
<td>Occlusal check. No artic paper</td>
<td></td>
</tr>
<tr>
<td>No pain</td>
<td></td>
</tr>
<tr>
<td>Taking painkiller</td>
<td></td>
</tr>
<tr>
<td>head cold</td>
<td></td>
</tr>
<tr>
<td>28/07</td>
<td></td>
</tr>
<tr>
<td>Biflurid applied</td>
<td></td>
</tr>
<tr>
<td>To continue</td>
<td></td>
</tr>
<tr>
<td>IV. +</td>
<td>Investigate further if still no improvement</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Next appt made</td>
<td></td>
</tr>
<tr>
<td>10/18/07</td>
<td></td>
</tr>
<tr>
<td>Dr reports improvement since she has been using fluoride mouthwash</td>
<td></td>
</tr>
<tr>
<td>Advised to continue</td>
<td></td>
</tr>
<tr>
<td>Xylocaine gel applied</td>
<td></td>
</tr>
<tr>
<td>NA given</td>
<td></td>
</tr>
<tr>
<td>21.22 ml. 2% lidocaine</td>
<td></td>
</tr>
<tr>
<td>21 + P1 x 2</td>
<td></td>
</tr>
<tr>
<td>21/12</td>
<td>Crown preparations</td>
</tr>
<tr>
<td>V alginate in metal tray</td>
<td></td>
</tr>
<tr>
<td>V provo putty + dorsal wash m-tray</td>
<td></td>
</tr>
<tr>
<td>Bite reg</td>
<td></td>
</tr>
<tr>
<td>M+M reg</td>
<td></td>
</tr>
<tr>
<td>أسبوع</td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Face bow recorded</td>
<td></td>
</tr>
<tr>
<td>Temp crown (AZ precision)</td>
<td></td>
</tr>
<tr>
<td>Cemented &amp; temp. bond</td>
<td></td>
</tr>
<tr>
<td>* 31 came out in imp - re-cemented</td>
<td></td>
</tr>
<tr>
<td>C. Rely x uni-cem.</td>
<td></td>
</tr>
<tr>
<td>Next appt made</td>
<td></td>
</tr>
<tr>
<td>PTO</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Procedure</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>21.8.07</td>
<td>Topical applied, AM5 LA 1x2 and lig spec, Bucc inf, P quits.</td>
</tr>
</tbody>
</table>
| 24.8.07 | Topical applied, AM5 LA given 2x 2ml 2% lig spec 21 | S431 Cr preps.  
Imp 2 provi, putyl, dorico mona in metal trays. B't reg memreg. Cast from previous preps sent off.  
Temp crowns made + cemented | Temp bond.  
Atringente, fuzzy tip + cord used. Shade - see CT cord.  
-> ceramic solutions. Next apt made. |
| 3.9.07 | Xylodent gel applied, AM5 LA given 2x 2ml 2% lig spec 21 | S431 crowns fitted + adjusted. Cemented = Rel'y X. Pt happy = appearance. OCO checked. Next apt made. |
| 11.9.07 | Topical, AM5 LA given 1x 2x 2% lig 61 | B45 or preps. Atringente + Cerd used. |  
Imp 2 provi, putyl, dorico mona  
B't reg memreg. Shade - essed.  
Temp crowns cemented + temp bond.  
-> ceramic solutions. Next apt made. |
**Section 12 – Visits outline & notes**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11/9/07</td>
<td>P.T: Fair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mesh + hand s + p 5432112345</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F.G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dem's r.e. l.e. r.r. l.r.</td>
</tr>
</tbody>
</table>

- PT enquired amount ots for complete x

21/9/07 Topical applied

- LA 1 x 2 2nd lig spec bucc inf 1Q
- 3 4 crowns fitted & Rely X
- LS unsatisfactory contact & U.P. pick up typ taken
- Cemented & Rely X
- Occluded & wire paper

- Topical applied vs
- LA given 2 x ml 2% lig spec

21/11/234 bull comp

- 3 x 7 inc root comp
- C. lup + N2 flow
- Occluded & wire paper

- Motographs taken – fee of card.
- P.D. routine + O.H. discussed - given 100 gram sugar
- Bill recd
- Sugar hidden before

Hyg. master 81/10/24