

Tooth wear management

Nadeem Younis presents a recent case report.

Direct composite resin restorations provide minimally invasive treatment which is a preferred indication in dentistry nowadays.

There are many advantages of using direct composite resin restorations for the management of toothwear; composites are minimally abrasive to the opposing tooth surfaces, aesthetic, cost effective and can be applied in a single visit.

Despite the many advantages, composite resin restorations do have some disadvantages such as polymerisation shrinkage, discolouration and the need for regular polishing and repair. In cases of bulk fracture they need to be replaced, however, smaller fractures can be repaired easily chairside in a single visit.

For the treatment of toothwear, direct composite resin restorations provide a very conservative treatment modality. In cases of inadequate space being available in centric occlusion the space can be created using the Dahl concept by applying composite restorations to the affected areas of the teeth. When used for these purposes in areas of high loading, the composite restorations should be placed in thicknesses of 1.5-2mm. The prognosis for



Fig 1.

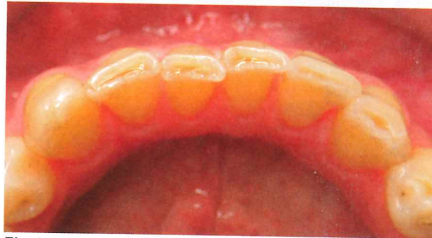


Fig 2.



Fig 3.



Fig 4.



Fig 5.



Fig 6.



Fig 7.



Fig 8.



Fig 9.

these restorations when placed in supra occlusion utilising the Dahl concept has been described as good.

The following is a case study demonstrating the restoration of worn lower anterior teeth.

Initial presentation

The patient presented with worn lower anterior teeth (figs 1 and 2). On examination there was a lack of anterior guidance and inadequate space for the

restoration of the incisal edges in centric occlusion. Treatment options with composite resins and ceramics were discussed. The patient preferred direct



Nadeem Younis

is the principal at Bridge Dental Practice, Burnley.

Composite resin restorations as they were aesthetic and cost effective.

Build up technique

Following a trial build up of the lower anterior teeth with free hand, the aesthetics and occlusion were checked in lateral and protrusive excursions to ensure posterior disclusion with no non-working side interferences.

There are a number of restorative placement techniques that have been described in the literature such as free hand build up, direct build up techniques using clear silicone indices or the use of Trutane retainers. I prefer a direct build up technique.

Isolation

The teeth were isolated using a rubber dam (fig 3). Moisture control is essential when restoring teeth with direct composite resin restorations; contamination with moisture will interfere with the bonding agents and the composite build up technique, thereby

jeopardising the restorations.

Preparation

The enamel was slightly prepared to remove the loosely attached enamel prisms at the incisal edges and to provide a smooth transition between the tooth surface and the restoration, thereby improving the aesthetics (fig 4).

Incremental build up

I used 3M Espe Filtek Supreme XTE to restore the incisal edges because it provides a simple layering concept. Enamel and dentine shades are available with different opacities and a clear translucent shade for recreating incisal edge characteristics.

Following etch and the application of a bonding agent, the lingual and the approximal walls were built up with the aid of Mylar strips using an A3 enamel shade (fig 5). This provided a shell outline making it easier to restore the teeth to full contour with relative ease (fig 6).

A3 dentine shade was used

to restore the bulk of the lower anterior teeth. Characterisations, such as the hairline cracks, were recreated utilising a brown tint following which the incisal third was overlaid with a clear composite (fig 7).

Finishing and polishing

Following the removal of the rubber dam, the occlusion was checked to ensure even contacts in centric occlusion. The shapes of the restorations were modified using fine red ring domed burs and the final polish was obtained using silicone points and fine 3M Espe Sof-Lex discs. Filtek Supreme XTE composites contain nanometer sized particles and polish to a high lustre with relative ease as well as retaining their polish in the long term (figs 8 and 9).

Conclusion

The patient adapted to the slight increase in the occlusal vertical dimension with relative ease and was delighted with the final outcome of the restorations.

Auto-enrolment solution

Denplan has partnered with Aon Employee Benefits, the UK health and benefits business of Aon plc, to offer its member dentists a simple pension auto-enrolment solution for their dental practices called 'Littleblue'.

The law on workplace pensions has changed, with all employers now legally required to automatically enrol certain staff into a pension scheme and make contributions. Although many dental practices won't have reached their auto-enrolment staging date yet (the date at which an employer's auto-enrolment responsibilities come into effect) it is important that practices are aware of the new regulations and start to prepare for the changes now. Aon's auto-enrolment solution "Littleblue" will be able to support practices with a step by step pension solution which can significantly ease the burden of complying with the new pension regulations.

Henry Clover, deputy chief dental officer at Denplan said: "We believe there are many dental practices that are not yet aware of how the law on workplace pensions has changed, or if they do

know about the new regulations, they may not have started preparing for auto-enrolment yet. We are working closely with Aon to inform our members about the pension changes and how this could impact their practice. We are also encouraging them to start preparing for auto-enrolment at least six months before their staging date. We believe Aon's Littleblue auto-enrolment solution will save our members time and effort and give practices the tools necessary to navigate smoothly through the process. Denplan members will also benefit from a specially negotiated price during their first three years using the service."

Clare Abrahams, head of auto-enrolment at Aon Employee Benefits, said:

"Littleblue was designed to help smaller organisations through the auto-enrolment process. That is now approaching its climax in 2016 with staging to reach levels in the hundreds of thousands every quarter from the beginning of the year. It is still an involved process in which the correct compliance is a key factor and small employers will welcome the streamlined approach that Littleblue offers.