Retraction paste: a clinical case

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Introduction

One of the major bugbears of my practicing life is the complete inability to use retraction cord with any predictability. Others write about its excellence and ease of use, but, however I try, there is first the struggle to fit the cord itself and then either chemical residue left behind or bleeding post removal. Often in the healthy mouth, there is insufficient crevicular depth for this and even less for double cording.

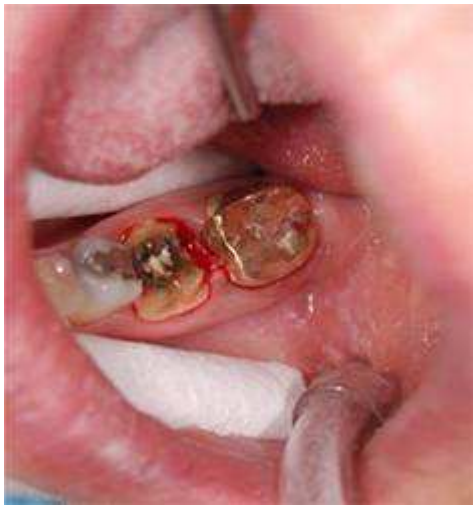
An alternative to retraction cord is one of the paste retraction systems although it may also be used with cord. Single or double cord both work.

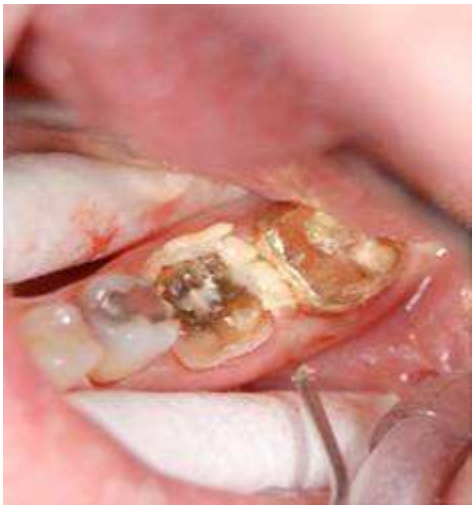
When used alone, it needs little or no pressure to apply which greatly minimizes the risk of traumatising the epithelial attachment and also enhances patient comfort. The paste is extruded directly into the sulcus where it holds in place with no further effort, creating space between the tooth and the tissue much like retraction cord. Bleeding where the gingiva has been traumatised and crevicular seepage are controlled by the presence of astringent aluminium chloride (a most effective compound for achieving haemostasis and preventing crevicular seepage in the gingival margin whilst avoiding the risk of systemic side effects (1)), shrinking the epithelial tissue – further expanding the sulcus. By adding a bulking compound, it is possible to create an element of extra gingival retraction/displacement without the inconvenience of retraction cord.

In use

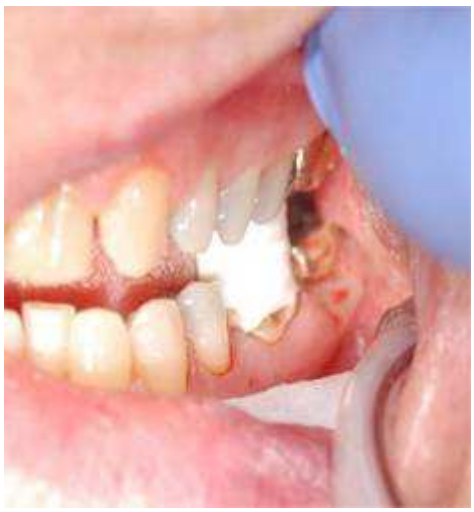
For this case, I used Traxodent, made by Premier to control a small area of gingival bleeding distal to the prepared 36 prior to taking images for a full coverage Cerec restoration . The individual delivery syringes mean there is no need for a clumsy delivery gun. As stated above, for those who are comfortable with the cord technique, it can be used as an adjunct and leaves no mess following removal, achieved by gentle rinsing with water from the 3-in-1 syringe. Gentle rinsing allows cleaning of the area without further trauma or provocation of the gingiva. Here it is used alone without cord.

Premier has also introduced cotton wool Retraction Caps in three sizes to accommodate different size crown preps. These are hollow caps designed to enhance gingival retraction and displacement whilst assisting haemostasis.

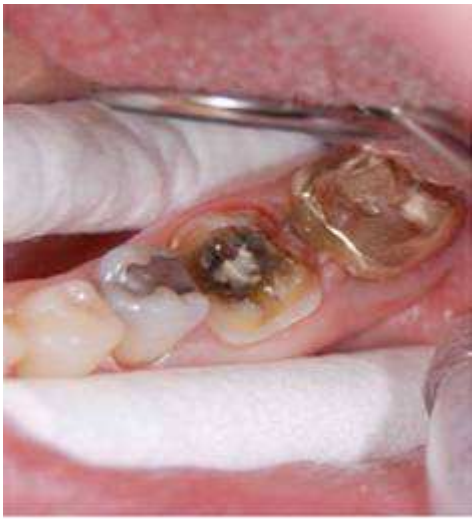




Before application of retraction paste Superficial application of paste only



Gentle biting pressure on retraction cap

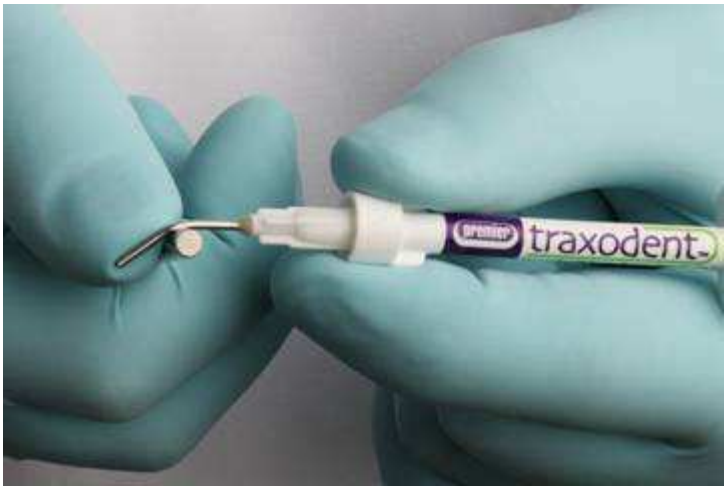


Ready for the image to be taken

Haemostasis is quickly achieved from the combined action of the (aluminium chloride) haemostatic agent and compression generated from the cap.

I have found this technique to be simpler in use due to the uncomplicated delivery of a simple syringe. The paste is soft and as a result flows onto the tissues easily and stays in place more reliably. On occasion, I have found thicker paste to slide easily out of the area and be difficult to keep in the desired place as the “sausage” slides out of the other side due to the moisture. The increased downward pressure necessary to force it into place can further irritate the tissues and provoke more bleeding. Thinner paste is gentler to place and has no tendency to “walk” out of the site.

The narrow, soft metal applicator tips are usefully narrow and so easy to position accurately. It can be easily bent over a mirror handle to provide easier access.

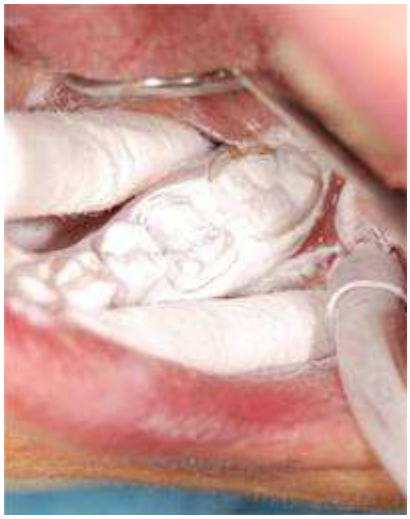


Bending the applicator tip improves access

The material has a contrasting green colour and so can easily be visualised and totally washed away with confidence.

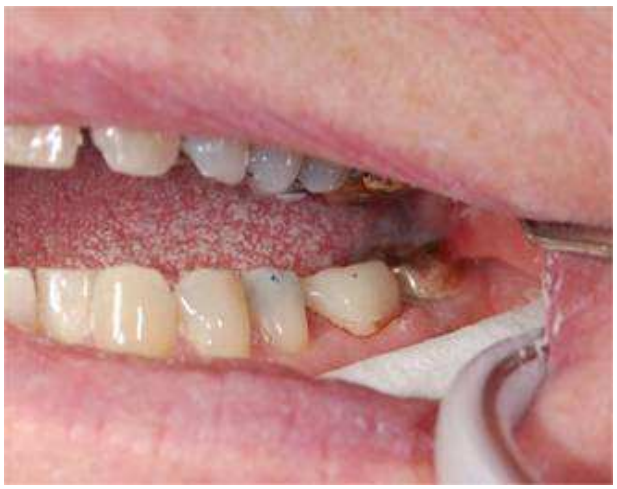
I use the CEREC system extensively and usually find that the body of retraction paste is perfectly adequate to displace the gingiva to get a good image without the soft tissue obscuring the view of the margin. When using

the contrast powder spray, it is very easy to see fluid seepage from the gingival crevice as the powder is lifted by it and the image is spoiled; this problem is very easily eliminated.

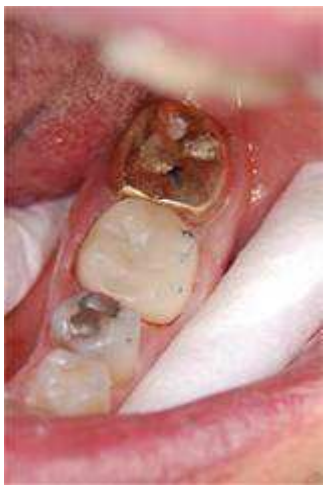


The tooth is powdered ready for scanning

The overall efficacy of Traxodent is excellent both in ease of use and speed of action.



Finished Cerec restoration to 36 buccal (facial view)



Finished Cerec restoration to 36, occlusal view

Summary

I had slowly reduced my use of retraction paste and had been using cautery a little more on the difficult cases due to the disadvantages of the high viscosity paste. The ease of use and efficacy of one of a lower viscosity has swung the balance back towards this technique and again reduced my use of cautery, thankfully.

References

(1) Weir DJ, Williams BH. Clinical effectiveness of mechanical-chemical tissue displacement methods. J Prosthet Dent 1984;51:326–9.

About the author

Jason Greenwood qualified in 1987 from The Royal London Hospital. He has always worked in general practice, first as an associate before starting The Stafford Dental Practice in 1991, continuing to expand into new purpose designed premises in 2006. Starting a master's course (General Dental Practice, Birmingham) caused him to develop a particular interest in CAD-CAM dentistry.