

CLINICAL SECTION

Optragate® oral retractor

John Scholey

University Hospital of North Staffordshire, Staffordshire, UK

This paper illustrates an innovation in oral retraction developed for use in general dentistry. The benefits for use in orthodontic bonding are described.

Key words: Optragate, orthodontic bonding, oral soft tissue retraction

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Introduction

Optragate® is a soft, latex free oral retractor made from Evoprene® a polymer of Styrol-Ethylen-Butylen-Styrol (Ivoclar Vivadent Ltd, Compass Building, Feld Spar Close, Enderby, Leicester LE19 4SE, Leicestershire, UK). It consists of a flexible, oval inner frame around which the Evoprene® sheet is draped as a continuous apron to cover the lips.

Although primarily marketed for improving access for routine dental procedures, it also provides an excellent, comfortable soft tissue retraction device for the purpose of orthodontic bonding.

Optragate® is available in 3 sizes, Junior, Small and Regular (Figure 1). The author has found that the small retractor is the most versatile size, fitting approximately 90% of patients, whilst the large retractor is suitable for larger adult mouths and the junior retractor for children below 10 years of age.

The retractors can be sourced directly from the manufacture and a number of dental supply companies. They are supplied in boxes of 80 of a single size or a variety pack of 40 each of regular and large. They have an extended shelf life with an expiry date of up to 2 and half years.

Benefits for orthodontic bonding

Ease of placement

The retractor is easy to place within seconds, and written and diagrammatic instructions are provided. Figure 2a–g shows the stepwise placement of a junior version of the retractor. It is important that the inner frame is pushed fully into the depth of the sulcus to hold it in place and to cover the lips completely.

Comfort and retraction

The retractor is flexible in three dimensions, offering comfort for long periods of retraction such as full arch bondings. There is also excellent retraction and visibility for both direct and indirect bonding as far back as the second molars (Figure 3a,b).

The flexibility of the retractor means that the patient can move their jaws freely with the retractor *in-situ*, and it allows for appropriate positioning of the lower jaw to facilitate optimum access during bonding. Once the teeth are bonded the retractor can be left *in-situ* to facilitate initial archwire placement (Figure 4).

Soft tissue protection

The positioning of the apron part of the retractor across the soft tissues of the lips and commisures of the mouth provides a robust protective barrier. This offers protection for the lips from acid etchant and self-etch prime (SEP) during tooth preparation, protecting from acid burns and white patches respectively. During effective



Figure 1 Optragate® is available in 3 sizes Junior, Small and Regular

Address for correspondence: Mr John Scholey, University Hospital of North Staffordshire, Staffordshire, UK.

Email: John.scholey@uhns.nhs.uk

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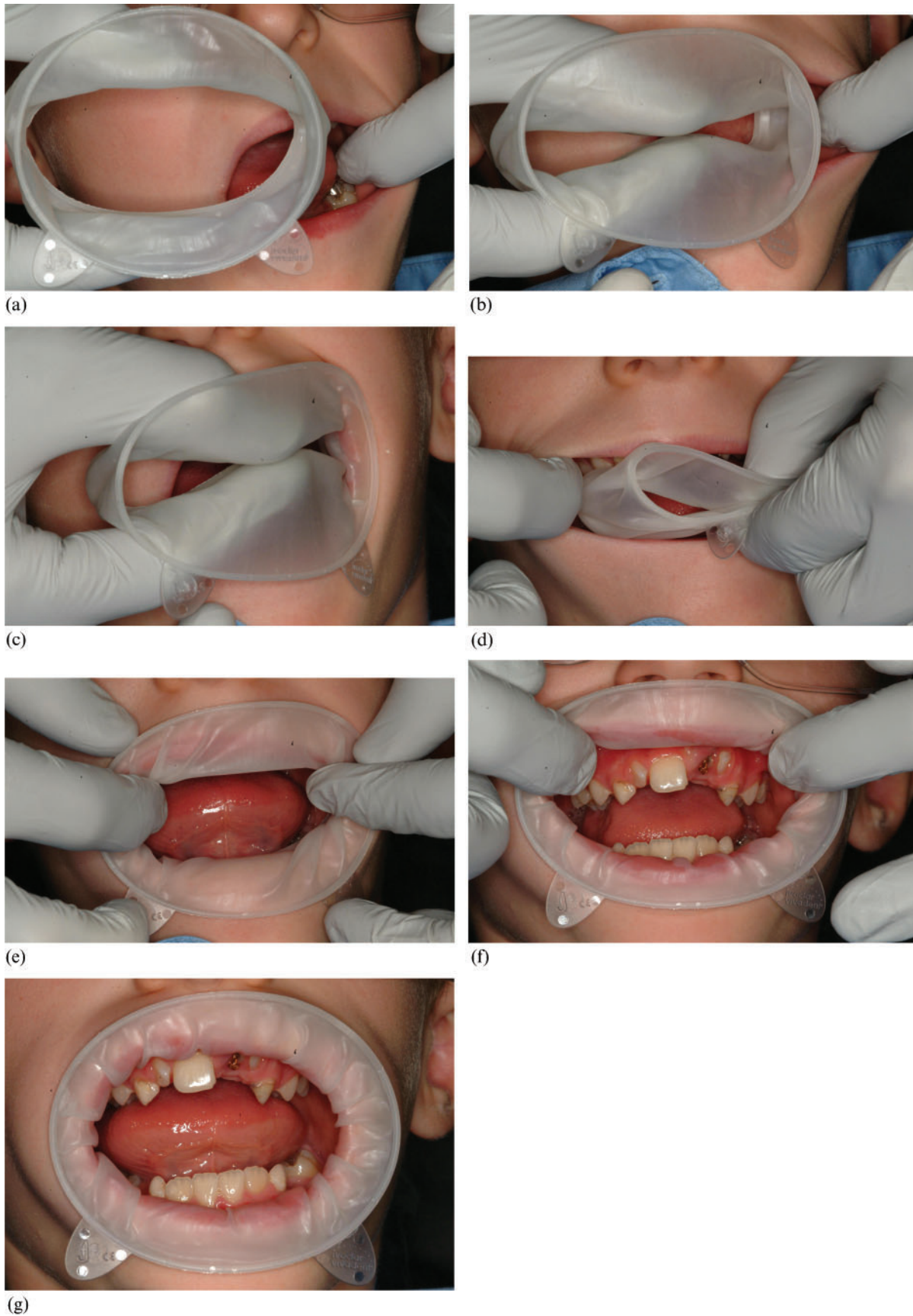
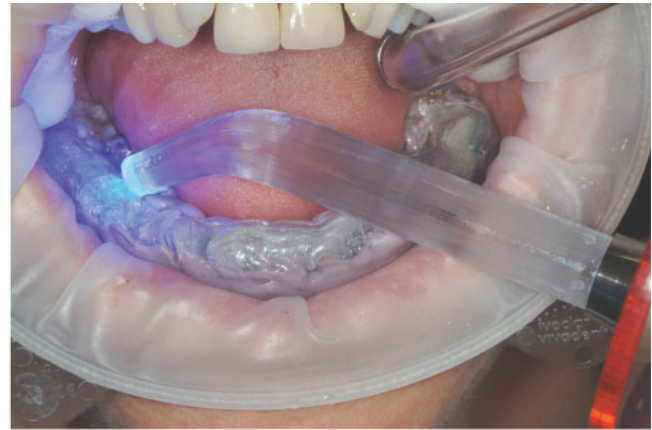


Figure 2 (a) Placement of optragate; (b) squeeze in centre; (c) seat into left buccal sulcus; (d) place in right buccal sulcus; (e–g) retract lips and seat oval ring into depth of labial sulcus



(a)



(b)

Figure 3 (a,b) Excellent retraction, visibility and moisture control for direct and indirect bonding



Figure 4 Retractor can be left in place for initial archwire placement

mixing of the two components of SEP it is possible for SEP to be pushed along the shank of the brush with inadvertent placement on the soft tissues. With the complete coverage of the lips afforded by the Optragate® retractor, this problem is prevented (Figure 5a,b).

Moisture control

Coverage of the upper and lower lips intra-orally provides a waterproof barrier from the large number of minor salivary glands present in the lips.

The patient can also move their lips comfortably without the risk of contamination of a prepared tooth. The saliva collects beneath the apron, being trapped in the pouch created between the lips and the retractor. Care must be taken when removing the retractor to wipe away any pooled saliva.

The retractor can be used with other methods of moisture control, such as absorbent buccal shields and



(a)



(b)

Figure 5 (a,b) Lips protected from white marks due to SEP on shank of microbrush

saliva ejectors, for an effective dry field for direct and indirect bonding.

Cross-infection

Each retractor comes individually packed and CE marked and is hermetically sealed for single use only. It therefore offers an alternative to standard plastic retractors that must undergo decontamination between patients. Use of single-use items is encouraged by the British Dental Association, whose written guidance on infection control states 'Equipment that is described as single use should be used wherever possible.'¹

From a patient perspective, it provides a clear message when removed from its sealed packet that the device is specific to the individual for a single episode and strongly reinforces a practice cross infection message. This represents a significant improvement compared to some of the plastic retractors that can degrade and look aesthetically poor after repeated decontamination.

A sterile version is soon to be made available for use in surgical procedures.

Potential issues with routine use

Cost

Retractors are supplied in boxes of 80 units and cost between 50 and 80 pence (equivalent 80 cents–1\$ 35 cents or 0.6–0.8 Euro) depending upon the supplier used and number ordered. However, this cost can be partly

offset by the need to buy standard plastic retractors and effectively decontaminate them.

Fit

If sized incorrectly or placed in individuals with lax soft tissues, the retractor can spring out of the mouth during the bond up process, ruining the dry field. However, experience with sizing and placement makes this a rare occurrence.

Disposal

Data sheet advice from the manufacturers advises disposal as clinical waste by incineration and so they are perhaps somewhat less eco-friendly than a reusable retractor.

Conclusion

Optragate® provides a single use, cost effective, protective, comfortable method of soft tissue retraction for orthodontic bonding.

Reference

1. Department of Health. HTM 01-05 Decontamination in primary care dental practices; April 2009. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/dh_089245