



Professor Andrew Eder considers the damage done by heavy-handed patients

The Oxford Dictionary of Dentistry defines ‘abrasion’ as: ‘The non-bacterial loss of tooth tissue due to frictional tooth wear by extrinsic agents. Common causes are toothbrushing, particularly with abrasive pastes, pipe smoking, and pencil chewing. The lesions produced by toothbrush abrasion are typically wedge-shaped and are most commonly associated with the labial and buccal surfaces of the premolars, canines, and incisors of the permanent dentition.’

These are not the only cause of abrasion – you can add to the list a diet rough in texture or using the teeth for a purpose other than nature intended, such as biting tags off new purchases, or cleaning between the teeth with tools not created for that purpose, for instance earring posts, keys and credit cards!

A patient suffering from tooth wear may report sensitivity, as well as problems chewing. Their teeth may also look shorter on smiling or when speaking. In addition:

- Teeth may become less white as some of the outer surface is lost



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- Front teeth may become sharp or chipped
- Chewing surfaces may wear flat and take on a shiny, pitted appearance.
- Restorations such as crowns and bridges may stand proud of the natural teeth.

Patient awareness and education

Raising awareness and educating our patients about the potential for abrasive tooth wear is essential if we are to prevent further damage. In my experience, many people mistake brushing hard for brushing well! It may be appropriate for the dentist or hygienist to demonstrate the best technique for the patient, and to recommend the use of a soft toothbrush and non-abrasive toothpaste.

Meanwhile, as already mentioned, foods with a rough texture will make matters worse, so it is worth having a discussion with patients about their diet. As a rule of thumb, if it’s tough to chew and/or fibrous, it may well be abrasive. Some of the more commonly consumed foods that can contribute to abrasion include celery, carrots, broccoli, apples, seeds and nuts. It is also very important to make sure patients understand their teeth are not a handy tool, for example to tear labels off newly bought items or to rip open packets of sweets when their hands fail them! Many people chew foreign objects, such as pens and pencils – very often, without realising. If a discussion with your patient brings such an issue to the fore, it might be worth suggesting they coat their chew-item of choice with a bitter-tasting solution designed for nail biters.

The reality of wear

As Wiegand and Schlueter (2014) wrote:

‘Although toothbrushing is considered a prerequisite for maintaining good oral health, it also has the potential to have an impact on tooth wear, particularly with regard to dental erosion. Experimental studies have demonstrated that tooth abrasion can be influenced by a number of factors, including not only the physical properties of the toothpaste and toothbrush used but also patient-related factors such as toothbrushing frequency and force of brushing. While abrasion resulting from routine oral hygiene can be considered as physiological wear over time, intensive brushing might further harm eroded surfaces by removing the demineralised enamel surface layer.’¹

Added to this, there is no doubt that tooth wear is on the increase; over three-quarters of adults show signs of tooth wear. Comparing the most recent Adult Dental Health Survey (ADHS) with its predecessor, figures suggest that in just 11 years the incidence of tooth wear in England has increased by 10%.²

In addition, it is important to note that tooth wear is multi-factorial and should not be considered in isolation – abrasion, erosion, attrition and abfraction are rarely seen in isolation (if ever), and may affect people from all walks of life at any age.

- *References available on request*

The London Tooth Wear Centre offers an evidence-based and comprehensive approach to managing tooth wear, using the latest clinical techniques and an holistic approach in a professional and friendly environment. For further information, please visit www.toothwear.co.uk, email info@toothwear.co.uk or call 020 7486 7180.