

# A holistic approach to tooth wear

Capitalising on the message 'Say Ahh: Act on Mouth Health' created for World Oral Health Day 2019 that takes place on 20 March, Professor Andrew Eder explores the growing body of evidence linking tooth wear and general health.

From time to time, newspaper and magazine articles feature the link between oral health and overall health; some are well researched whilst others bend the evidence base to suit an eye-catching headline. What all of them seem to have in common, however, is that they tend to focus on periodontal and other inflammatory diseases.

To some extent that's all to the good, yet there is a bigger oral health picture to be painted for the general public and part of that is how tooth wear, too, is not disconnected from the rest of the body. With World Oral Health Day approaching, we dentists have a good 'in' for discussing this connection with patients and highlighting what a diagnosis of tooth wear may also indicate in terms of their overall health.

In line with this ideology, Ahmed (2016) argued that tooth wear of a pathological nature should not be considered in isolation, but rather as a manifestation of other conditions – both medical and psychological.<sup>1</sup>

The signs that indicate pathological tooth wear is occurring and action may be needed include:

- Sensitive teeth
- Discolouration, including yellowing and loss of shine (where some of the outer enamel layer has been lost)
- Sharp or chipped anterior teeth
- Occlusal surfaces wearing flat and taking on a shiny, pitted appearance
- Altered occlusion as vertical height changes
- Restorations standing proud of the teeth
- Abfraction lesions developing cervically
- V-shaped notches or shallower cupping present cervically.

Considering such indicators in a holistic way, Ahmed (2016) wrote: '... the underlying tooth wear aetiology can...be pathological, triggered by medical and/or mental health disorders, such as gastroesophageal reflux disorder, hiatus hernia, stress, anxiety, depression, neuroticism, body dysmorphic disorders, eating disorders associated with self-

induced purging, drug and/or alcohol dependencies, or obsessive-compulsive oral hygiene practices'.<sup>1</sup>

Thus, when managing tooth wear for patients, to achieve the best possible outcome dentists need to be able to recognise the underlying cause(s) before any preventive advice and/or treatment is provided.<sup>1</sup>

## Acid erosion

Evidence suggests conditions such as gastric reflux, regurgitation and micro-aspiration increase the incidence of tooth erosion in sufferers, when compared to non-sufferers.<sup>2</sup> This kind of tooth surface loss is the result of non-bacterial chemical or electrolyte processes, usually acid.<sup>2</sup> Clearly, acid is present in the mouths of people with such gastric issues more frequently and for longer than in healthier individuals.

Of course, these underlying conditions are medical rather than dental, however the dentist may, in fact, be the first healthcare professional to recognise there is an underlying problem and therefore be able to encourage them to visit their GP in order to get the medical care they may need.

As for the tooth wear itself when acid is in the mouth for extended periods of time and left unchallenged, it can result in substantial oral health complications. Advice for a patient whose dentition is compromised by reflux, bulimia, pregnancy sickness, hiatus hernia etc. includes:

- Issuing a fluoride rinse or gel and prescribing a high-fluoride toothpaste for daily use
- Not brushing immediately after vomiting, a reflux event or consuming acidic foodstuffs, but rinsing with a fluoridated mouthwash and chewing sugar-free, xylitol-sweetened gum afterwards.

Extra protection can be provided via calcium and phosphate ions, helping to restore the mineral balance, neutralise acidic challenges and stimulate salivary flow.



## Parafunctional activity

Attrition, meanwhile, may indicate an underlying emotional issue. This type of wear involves contact between the teeth over and above normal use, as seen in patients who generally grind and clench their teeth at night.

This bruxism has been linked to a stressful lifestyle and, if a patient presents with pain and/or tooth wear that can be attributed to bruxism and they share with you that they are stressed, recommending treatment with a physiotherapist or osteopath with specialist knowledge of the temporomandibular joint (TMJ) might be in order.

It might also be appropriate to make such a referral part of a three-step plan, with the other two steps involving a prescription for muscle relaxants and use of Michigan Splint overnight. A Michigan Splint will protect against bruxism and TMJ pain and allow the patient's mandible to assume the most reproducible, comfortable position. This may also correct the habitual grinding pattern that has developed.

In addition, patients themselves can contribute to improving their health by incorporating some relaxing habits into their bedtime routine, for example by practising yoga, reading, avoiding electronic devices or having a bath. It may also be a good idea to ensure patients are brushing effectively yet gently with a relatively soft toothbrush and a toothpaste that is low in abrasivity. A desensitising toothpaste can also be helpful in alleviating the pain caused by sensitivity related to attrition.

## Whole health for life

The weight of evidence suggests that there are many possible causes of tooth surface loss – both chronological, as part of the natural ageing process, and pathological – that may have a detrimental effect on the dentition.

As stated succinctly by Ahmed (2016), 'DCPs can have an active role in improving the mental and medical health of tooth wear patients, consequently leading to an improvement of their overall quality of life. This can be achieved through the identification and

monitoring of the tooth wear aetiology manifested through grinding, clenching, dental erosion, or compulsive teeth brushing, and associated symptoms such as sensitivity and pain. As such, early engagement of mental and/or medical healthcare providers in the treatment planning and management process becomes cardinal.'<sup>1</sup>

Thus, paying attention to the mouth in isolation without reference to patients' overall health may have adverse consequences. With this in mind, The London Tooth Wear Centre offers an evidence-based and comprehensive approach to managing tooth wear, using the latest clinical techniques and a holistic approach in a professional and friendly environment. If you have any concerns about your patient's tooth wear, please visit the website at [www.toothwear.co.uk](http://www.toothwear.co.uk), email [info@toothwear.co.uk](mailto:info@toothwear.co.uk), or call 020 7486 7180. ■

## References

1. Ahmed KE. Management of tooth wear: a holistic, dental, medical and mental healthcare approach. *Prim Dent J* 2016; 5(3): 35-37
2. Ranjitkar S et al. Gastroesophageal reflux disease and tooth erosion. *Int J Dent* 2012; article ID 479850

## About the author

**Professor Andrew Eder is a Specialist in Restorative Dentistry and Prosthodontics and Clinical Director of the London Tooth Wear Centre, a specialist referral practice in central London. He is also Dean and Professor of Dentistry at the University of Buckingham Dental Institute and Emeritus Professor at the UCL Eastman Dental Institute.**

