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Self-Inflicted Dental Injury Presenting as Localized Anterior Tooth Surface Loss

Abstract: A case of localized anterior tooth surface loss (TSL) with an unusual aetiology is reported. Whilst suffering from a bout of acute depression and anxiety, a 29-year-old female caused significant trauma to her anterior dentition with a pair of fabric scissors. The presentation and management of this case is described.

Clinical Relevance: Although tooth surface loss is a common clinical finding in many patient groups, practitioners should be aware of possible unusual aetiologies which may be involved.

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A 29-year-old Asian female was referred to the Department of Restorative Dentistry at St George's Hospital regarding anterior tooth surface loss (TSL). She presented complaining of sensitivity associated with chipped and roughened anterior teeth.

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She also reported that gaps had appeared between the incisal surfaces of opposing anterior teeth and that her speech had altered. The symptoms had been present for several weeks and had not changed in severity since their onset. She was keen to have her teeth restored for both functional and aesthetic reasons.

The patient's medical history was clear and she was in full-time employment as a legal clerk. She was married, although openly admitted her marriage was a source of great unhappiness for her.

Generally, the patient appeared healthy and relaxed. An extra-oral examination revealed nothing abnormal and, intra-orally, oral hygiene was fair. The few posterior restorations that were present were satisfactory. Soft tissues were healthy and well lubricated. The anterior teeth showed significant areas of TSL (Figure 1). The distribution of the TSL extended from canine to canine in both maxillary and mandibular arches and predominantly affected the incisal surfaces of these teeth.

The residual tooth tissue had an uneven ragged surface which could not be readily attributed to either erosion or

attrition.

On questioning, the patient initially alluded to the possibility of some sort of foreign object being used to alter her teeth. Further use of open-ended questions led the patient to admit to an episode of self-harm.

She reported that she was under intense stress professionally and in her personal life. Her unhappy marriage coupled with work pressures and the feeling of being 'trapped, with no-one to talk to' led her to inflict damage to her teeth. The patient reported that, after work one evening, she took a pair of fabric scissors (Figure 2) and 'attacked' her teeth with them. The episode of self-harm lasted a few minutes and culminated in an emotional breakdown. This episode had not been discussed by the patient with her family and, indeed, at this stage, it was only dental professionals in whom the patient had confided.

The patient denied any previous episodes of self-harm and had no history of mental illness. She explained that she felt 'emotionally removed from herself and her state of mind' during the episode of self-

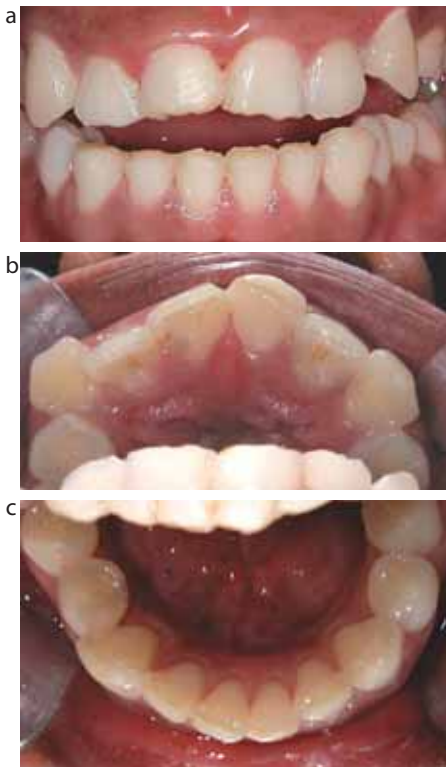


Figure 1. (a) Labial view showing damaged residual tooth tissue. The ragged pattern of tooth surface loss is inconsistent with erosion or attrition. (b) Occlusal view of anterior maxillary teeth at presentation. (c) Occlusal view of anterior mandibular teeth at presentation.

harm, but was now receptive to advice and available help.

The teeth were restored using adhesive direct composite resin, to the patient's satisfaction (Figure 3). The rapidity of the wear may have precluded dento-alveolar compensation from occurring at the time treatment began. As such, interocclusal space was available for the restorations and no alteration in occlusal vertical dimension was needed. Restoring these teeth in a conservative manner ensured that they were not subjected to any further damage, this time at the hands of the dental profession. This is in contrast to other possible conventional crown procedures which would have added to the tooth damage caused by the scissors.

Consent was obtained for a psychiatric referral.

Discussion

It is well documented that
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deliberate mutilation is practised by certain groups for social, cultural or religious reasons.¹ Self-inflicted injury may also be seen in patients with particular psychiatric² and neurological conditions, eg Lesch-Nyhan syndrome,³ autism,⁴ Tourette's syndrome⁵ and some instances of central nervous system trauma.⁶ The psychology of deliberate self-harm is complex.^{7,8} Authors have hypothesized that it may be carried out as a method of tension relief or to achieve an indirect secondary gain.⁹ It may also be associated with an acute psychotic episode.¹⁰ Self-mutilation may be used by some children as a means of gaining attention.¹¹

Whilst a separate psychiatric condition from that detailed in this case report, dysmorphophobia (body dysmorphic disorder) can lead to patients becoming fixated on an imaginary flaw in their physical appearance, which may include teeth.¹² In cases in which a minor flaw does exist, the patient tends to exhibit an inordinate amount of anguish regarding this flaw. Onset of this condition is usually in late adolescence and early adulthood, and may be prodromal of schizophrenia.¹²

In this case, it could be hypothesized that the stress and anxiety suffered by the patient, both professionally and domestically, led to this episode of self-inflicted dental trauma. It is hoped that the psychiatric care which the patient is now receiving will prevent any future episodes of this type. Although referral from a dental professional to a psychiatrist is not common, in a case like this it is entirely appropriate. Dentists are not normally academically qualified or experienced enough to provide effective

counselling and care for patients of this type. They should, at least, liaise with the patient's general medical practitioner once consent has been obtained. This is particularly important as dentists may be the first to know of a patient's psychological distress relating to either self-harm or dysmorphophobia. Oral problems may be the first detected manifestation of a psychiatric condition and, as such, dentists have a vital role in patient care which should not be underestimated.

Conclusion

Dentists should be aware that, when confronted with disease of unknown aetiology, the possibility of self-inflicted injury exists. In such cases, the dental profession should be aware that the patient may be experiencing a significant amount of emotional unrest. An honest and caring approach should be used during the consultation, with the use of open-ended questions to allow the patient to express his/her worries and concerns at an appropriate pace. Dentists should not undervalue their own abilities when questioning patients. An empathic and non-judgemental consultation technique may allow patients to discuss openly issues which they would otherwise keep to themselves.

Dental rehabilitation should be carried out in a conservative way to minimize any further unnecessary dental harm. Psychiatric referral is indicated, but this may cause the patient some distress initially, and referral to the GMP may be the most appropriate first step.



Figure 2. The fabric scissors used by the patient to damage her teeth.



Figure 3. Appearance of teeth following repair with direct composite restorations.

References

- Morris AG. Dental mutilation in southern African history and prehistory with special reference to the 'Cape Flats Smile'. *S Afr Dent J* 1998; **53**: 179–183.
- Rodd HD. Self-inflicted gingival injury in a young girl. *Br Dent J* 1995; **178**: 28–30.
- Cusumano FJ, Penna KJ, Panossian G. Prevention of self-mutilation in patients with Lesch-Nyhan syndrome: review of literature. *J Dent Child* 2001; **68**: 175–178.
- Friedlander AH, Yagiela JA, Paterno VI, Mahler ME. The pathophysiology, medical management, and dental implications of autism. *J Calif Dent Assoc* 2003; **31**: 681–691.
- Shimoyama T, Horie N, Kato T, Nasu D, Kaneko T. Tourette's syndrome with rapid deterioration by self-mutilation of the upper lip. *J Clin Pediatr Dent* 2003; **27**: 177–180.
- Peters TE, Blair AE, Freeman RG. Prevention of self-inflicted oral trauma: report of case. *Spec Care Dentist* 1984; **4**: 214–215.
- Favazza AR. Why patients mutilate themselves. *Hosp Community Psychiatry* 1989; **40**: 137–145.
- Favazza AR. The coming of age of self-mutilation. *J Nerv Ment Dis* 1998; **186**: 259–268.
- Edelson SM, Taubman MT, Lovans OI. Some social contexts of self-destructive behaviour. *J Abnorm Child Psychol* 1983; **11**: 299–311.
- Rhonda LA, DiAngelis AJ. Multiple autoextractions: oral self-mutilation reviewed. *Oral Surg Oral Med Oral Pathol* 1989; **67**: 271–274.
- Hoffman HA, Baer PN. Gingival mutilation in children. *Psychiatry* 1968; **31**: 380–386.
- Driesch G, Burgmer M, Heuft G. Body dysmorphic disorder. Epidemiology, clinical symptoms, classification and differential treatment indications: an overview. *Nervenarzt* 2004; **75**: 917–929.

Book Review

Radiology for the Dental Professional
8th ed. By HH Frommer and JJ Stabulas-Savage. London: Elsevier, 2005 (£37.99, 56.95 EUR). ISBN: 0-323-03071-8.

This is the eighth edition of a well-established textbook of dental radiography and radiology that was first published in 1974 and was previously entitled *Radiology for Dental Auxiliaries*. As with previous editions, the authors express that their purpose is to 'apply basic principles to clinical practice'. With the introduction of a new co-author, Professor Stabulas-Savage, comes the new title and expanded text which aims to widen the intended audience to not only include professionals complementary to dentistry, but also dental undergraduates and practising dentists and hygienists.

The emphasis of this book relates to dental radiography and includes: basic radiation physics, image formation, and biological effects of radiation, radiation protection, processing, intra-oral and extra-oral radiographic techniques, quality assurance and legal issues.

New to this edition are chapters on the dental x-ray machine, radiography of the temporomandibular joint, quality assurance and basic principles of radiographic interpretation. The authors have designed each chapter to relate to a one-hour lecture period and I feel that this does in fact work very well. I welcome the helpful hint feature in the radiographic techniques section, which offers practical tips for improving radiographic images.

I found the radiography

content to be clearly explained and logical; unfortunately however, the radiation dose units of rads and rems are predominantly described, although SI units are mentioned. In addition, the importance of rectangular collimation is discussed, but the majority of images relating to technical procedures demonstrate circular collimation in practise. I feel that it is also worth noting that the legislation chapter relates to regulations relevant to the United States of America and are therefore of limited relevance to the United Kingdom training curriculum.

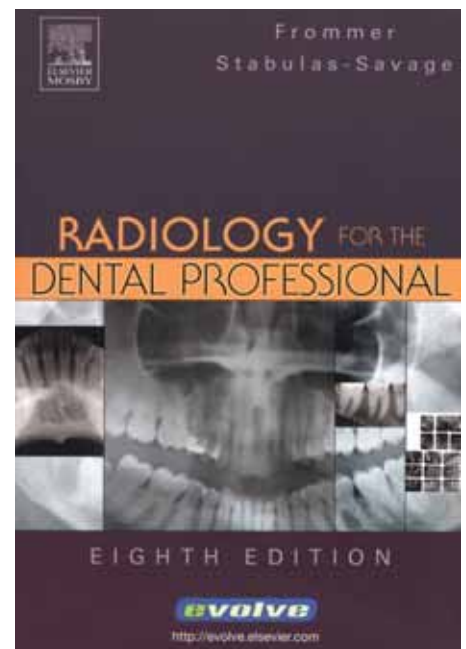
The chapters on radiographic interpretation are brief and only provide the reader with a basic overview of pathology affecting the dentition and surrounding structures. This makes me question the book's appeal to both the dental student and, in particular, the practising dentist.

On the whole, the chapters are well written, comprehensive and concise. There are certainly a substantial number of illustrations throughout; diagrams and photographs are clear; however, I feel that some of the radiographic images are of inferior quality when compared to some radiographic textbooks on the market. An example of this relates to the periapical images seen on pages 198–199.

I generally enjoyed this updated and expanded textbook of *Radiology for the Dental Professional*. The radiography content is clear and well written. I do, however, feel that the radiological interpretation section is rather sparse in content and I would like to see this area

expanded further. In addition, I would question the use of this edition in the teaching of the UK dental student.

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CPD ANSWERS

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| 1. B, D | 6. A, C, D |
| 2. A, C, D | 7. A, B, D |
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| 5. A, C | 10. A, D |