

Seeking True Multidisciplinary Approach to Eating Disorders: Dentists as Case-Finders

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Abstract

Eating disorder (ED) is a distinctly convoluted psychiatric disorder that has an influence on oral health and general well-being. It involves a variety of complex behaviors such as hyper self-analysis of eating patterns, changes in body weight, and physical traits. The pathophysiology of ED is unclear. Both, the subtype, and intensity of ED impact oral health due to a combination of somatic and psychological expression. Though ED is a psychiatric disorder, dysregulated eating patterns and homeostasis remain present with profound comorbidities. Neurobiological changes correlating with brain impulsivity have been demonstrated through neuroimaging, predominantly in frontal-striatal and meso-corticolimbic circuits of the brain. A variety of literature have described diverse oral lesions following the eating pattern in ED. Dentists or oral medicine specialists have been case-finders who recognize patients with unusual eating habits, and other behavioural patterns which aid in early diagnosis. The most unique and commonly reported manifestations are dental caries, erosions, palatal ulcers, and oral infections. Professional training and continuing education that spans across psychiatric disorders can bolster awareness and reinforce appropriate knowledge among dentists. This review gives a perspective of the authors on ED patients, oral and overall health interplay, interprofessional education, and multidisciplinary care for early diagnosis of ED.

Keywords: Dentist, Oral Medicine specialist, Psychiatrist, Eating disorder, Interprofessional education, Multidisciplinary care

Introduction

Need for the research

According to the RCPsych survey May 2020 (1,2), there has been an alarming 43% increase in urgent mental health referrals since the lock-down, with predicted ongoing increases; anecdotally, ED services across the UK have reported a corresponding increase in high-risk referrals (3,4). We can acknowledge that the COVID-19 pandemic is going to have long-lasting effects in terms of physical, as well as mental health. Psychiatry will undoubtedly continue to play a prominent role in healthcare. In light of this, patient care must take on a more holistic and integrated approach than ever. This is perhaps most urgent in a biopsychosocial condition like ED. In addition, there is a well-established link between oral lesions and ED, which requires input from a dentist that they often come across. The usual ICD-10 diagnoses of Anorexia Nervosa, Bulimia Nervosa or Binge-Eating Disorder, as well as the diagnoses of ARFID (Avoidant Restrictive Food Intake Disorder) or OSFED (Other Specified Feeding or Eating Disorders) all carry the risk of oral lesions.

Oral and overall health interplay of ED

Oral health plays a pivotal role in overall well-being. Oral lesions can be the first tell-tale sign for numerous systemic disorders. Most often, the archetype of the oral lesion can provide apparent indications, a concern for a systemic ailment, especially when it involves parafunctional habits. Eating disorders (ED) are psychosomatic conditions that encompass both systemic and oral health.

Well-documented oral manifestations of ED include generalized teeth erosion, rampant caries, self-inflicted palatal ulcer sporadically leading to necrotizing sialometaplasia, atrophic mucosa, bilateral parotid gland enlargement, xerostomia, impaired taste, oral candidiasis, and angular cheilitis and, increased risk for periodontal disease. A clinical study involving 72 ED patients, with self-inducing vomiting in 66 patients, identified their location of teeth erosion as 41.6 % of the palatal and lingual surfaces which contrasted with the remaining 36.6% dietary erosion on the occlusal aspects of the teeth (5). Patients who developed lesions on the facial aspects (21.8%) required oral health education and aesthetic clinical intervention. Literature uncovers that the average pH of the vomitus was 3.8 which on persistent exposure led to acute erosions (6). These erosions need immediate intervention with acid-resistant dental materials to prevent further damage and failing to do so may lead to dentinal sensitivity, pulp exposure, vertical fractures, and loss of vertical dimension.

Unfortunately, due to ED’s nature as an innately complex psychiatric disorder, patients with ED specifically struggle with body image issues more so than the general population, and become hypervigilant to comments about their weight, or their disorder in other healthcare settings due to negative cognition or lived experience (7). This fear of embarrassment appears to prevent many patients from accessing dental care which might result in limiting interactions with the dentist. In addition, the fear of 'being found' of purgative behaviors is robust in patients with ED, which leads to avoidant behaviors towards the dentist, medical monitoring, etc. - in essence, anything that could reveal their maladaptive coping mechanisms (8). Nevertheless, it is crucial to note that when interviewed sensitively, most patients are indeed concerned about their oral health, teeth, and physical health and would like to receive care.

Frank et al reported short-term behaviors of the ED patients which correlated with significantly involved areas of the brain. Consistent alterations in the incentive pathways of the brain have been identified substantially in these patients; a discovery that can be an area of focus for novel therapy development (9). Although an altered dopamine pathway secondary to prediction error response to food and monetary changes was highlighted in these studies, these reward circuits can also be influenced by stimuli in the insula, striatum, and orbitofrontal cortex. These indirectly impact perception, cognition, and social interaction in these populations. A recent systematic review demonstrated neuroimaging techniques and unexplored neurobiological pathways of the spectrum of ED patients. The studies in the review expressed the findings using MRI scans as their primary modality of imaging. They explained that purging was positively associated with ventral striatum volume and BMI was negatively linked to striatal grey matter volume (10). These findings tie up the connection between the atypical symptoms, self-regulatory disruption, anomalous neural activity, and decreased fronto-striatal circuits (11). Nonetheless, further research can help analyze and explore fronto-striatal circuits, the diminished volume of the cortex in patients with ED.

Interprofessional collaboration paves the way for best practice

Dentists or oral medicine specialists may be the case finders or the first clinicians to detect oral manifestations of an ED. They may not diagnose the underlying psychological pathology but can play a significant role in encouraging the patients and creating a comfortable environment for further follow-ups (12). It is frequently seen that patients are afraid of being judged or questioned about their underlying condition – thus, it is in the hands of a dentist to create a safe space for this conversation. Dentists often engage patients in managing their dental conditions in the setting of eating patterns that lead to erosions and other complications (12, 13). This may constitute persistent patient education, encouraging patients to maintain meticulous oral hygiene, preventing opportunistic infections, and placing restorations (14, 15). During such events, a dentist may require a few visits to establish genuine trust and rapport to promote a reliable relationship (16). They also play a crucial liaison role in coordinating multidisciplinary care for ED patients and utilizing procedures in the clinic, such as transcutaneous electrical nerve stimulation (TENS), and the recommendation of non-pharmacological distraction techniques, such as over-the-counter (OTC) salivary substitutes/stimulants to enhance patients' confidence. There is an urgent demand for creating awareness and educating patients to break their inhibitions and misperceptions of self-image. Open communication and empathy help these patients cope well and engage them in treatment. This is by no means an easy approach that fits all. Some patients are still ambivalent about recovery and guarded in their approach, which requires a non-judgemental demeanor to communicate the intent professionally and empathetically (16-19).

Table 1: A few considerations for a dentist or an Oral Medicine specialist during a dental appointment before referral to a psychiatrist:

- Oral hygiene practices, and home dental care
- Dietary lifestyle, and periodic dental prophylaxis
- Standardized approach to dental examinations and radiographs
- Tracking dental erosion pattern from 6 months to 2 years
- Determining the quality and quantity of saliva
- Uniformity in investigating the oral and systemic interface of ED
- Understanding the distinction between purging and non-purging practices

Summary

An integrated care approach is proposed where any concerns raised at the dental practice would be relayed to the PCP/ Psychiatrist and can be followed up for better continuity of care. Since electronic medical record-keeping has emerged, coordinating care across different specialties is not implausible. Indeed, the most critical concerns would be the patient's consent and software integration. First-hand communication between the clinicians and sharing medical charts across disciplines can create a platform for a better holistic treatment plan. As a part of wider integration, interprofessional education and continuing professional development events would share knowledge between medical and dental communities to incorporate the overall approach to treatment. This is especially important in the likely case that the dentist is the first point of contact for an undiagnosed patient with an ED; in turn, it would be invaluable for non-psychiatrists to learn and recognize ED. The utilization of soft skills and empathy while dealing with this tricky and complex disorder is paramount to ensure that a rapport is built with the patient that is conducive to their treatment and eventual well-being. Ultimately, open communication, empathy, patient education, and professional development are the crucial factors in designing treatment plans for ED patients which may have a check on the cost of healthcare and significantly reduce the length of the hospital stay. Additionally, the harmful and largely scalar impact caused by ED during the COVID-19 pandemic facilitated extensive amounts of self-reflection, in which these destructive patterns were exacerbated. Internal conflicts notwithstanding, on a large-scale research basis, studies on ED have been persevering and ongoing (20). More studies are required in the future and further in-depth research will help understand the complexities of the spectrum of ED and collaboration with other specialties will result in a better patient outcome.

Conflict of Interest

The authors declare no conflict of interest.

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