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Communicating effectively with patients suspected of having bulimia nervosa

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The reported cases of eating disorders among high school students, college students, athletes and preadolescent children may be increasing. Eating disorders within these groups are well-documented.[1-6] Hoek and Hoeken[3] recently conducted studies and analyses of the incidence of eating disorders. They reported an incidence rate for anorexia nervosa of 0.03 percent in females. The rate for bulimia nervosa was approximately 1 percent in females and 0.1 percent in males. This translates to approximately eight cases per 100,000 population with regard to anorexia and 12 cases per 100,000 with regard to bulimia nervosa.

The dental team is in a prime position to assist patients who have eating disorders.

Other literature places the incidence at 0.5 to 3.7 percent for anorexia and 1.1 to 4.2 percent for bulimia.[4] Because the disorders often are not recognized and reported, it is difficult to determine the true number of cases. Often, eating disorders do not fall within the diagnostic codes that enable them to be recorded as cases being managed. Affected people often seek professional care only after many years of uncontrolled eating practices, and reports show that fewer than one in 10 ever seeks professional care. Because of the unreported cases, it is possible that the actual numbers may be much higher than those documented.[1-6]

The purpose of this article is to offer dental practitioners suggestions for opening a dialogue with patients who are suspected of having eating disorders. Our intention is to assist the practitioner in approaching these patients. Recent research[7] shows that dental personnel

ABSTRACT

Background. The dental team often is confronted with the clinical appearance of erosion affecting the hard and soft oral tissues. An investigative process often is needed to determine the cause of such erosion, because factors other than eating disorders may be involved. The authors present a protocol that should be considered in the assessment of dental erosion. Guidelines provide direction for the clinician toward opening a dialogue with a patient when the suspected cause of erosion is an eating disorder.

Types of Studies Reviewed. The authors review publications related to the causes of dental erosion and the patterns that are involved with both chemical and mechanical destruction of oral tissues. They also discuss the oral-tissue effects related to eating disorders. The authors stress the importance of assisting parents in obtaining adequate treatment for pediatric patients.

Results. Cases of eating disorders among female college students, athletes, preadolescent children and men are well-documented. However, dental staff members often do not feel comfortable beginning a dialogue with patients who are suspected of having an eating disorder. This article focuses on the proper protocol for approaching such patients and beginning a dialogue. In addition, the authors provide suggestions for limiting further erosive damage to the tissues. They also discuss other causes of erosion that should be considered when assessing any type of oral erosion.

Clinical Implications. The dental team is in a prime position to assist patients who have eating disorders. Timely treatment by mental health and other medical professionals is crucial. The authors suggest a dialogue for approaching these patients and offer educational material to reduce further tissue destruction.

Key Words. Eating disorders; bulimia; dental erosion; prevention; communication skills.

often are not well-versed in recognizing and approaching patients who have anorexia nervosa or bulimia nervosa. This is unfortunate, because the early signs usually are visible in the mouth first, before other indicators are apparent.

The ability to identify early changes in oral soft and hard tissues associated with eating disorders, especially bulimia nervosa, places the trained dental professional in a unique position to identify and treat the oral manifestations associated with these disorders. More importantly, it provides the dental professional with the opportunity to refer the patient to a multidisciplinary team of psychiatrists, psychologists, registered dieticians, nutritionists and other health care professionals who are trained to treat patients with this potentially fatal disorder.[8-11]

BULIMIA NERVOSA

Bulimia nervosa is characterized by a persistent preoccupation with body weight and shape, with repeated episodes of bingeing (consuming large amounts of food in a short period) followed by self-induced vomiting, use of laxatives, fasting and/or excessive exercise to control weight. Vomiting temporarily lowers the pH in the mouth, and dental enamel begins to erode when the pH is less than 5.2.[12-14] Successive demineralization and dissolution due to vomiting can result in the total loss of enamel and, in time, may involve the dentin and cementum.[15-17]

Practitioners need to attempt to distinguish erosion resulting from self-induced vomiting from that resulting from other causes.

Dental erosion associated with repetitive vomiting often leads to thinning and chipping of the incisal edges of the incisor teeth, anterior open bite, loss of vertical dimension, compensatory overeruption of opposing teeth and increased thermal sensitivity (Figure 1).[17] These changes are subtle and initially may be difficult to detect (Figure 2[18]).[19] However, because the damage is irreversible and progressive, eventually it can involve the pulp and result in the loss of involved teeth.[20,21] Other significant clinical findings often associated with bulimia nervosa include calluses on the dorsum of the dominant hand (as a result of repeatedly pushing fingers down the throat to induce vomiting [the so-called Russell's sign]), salivary gland enlargement (especially involving the parotid glands) (Figure 3[22], page 1133) and reports of frequent sore throats.[18,23,24]

The first step for practitioners is to attempt to distinguish erosion resulting from self-induced vomiting from that resulting from other causes. Many other conditions and treatments, such as gastroesophageal reflux disease, alcoholism, Sjögren's syndrome, irradiation to the head and neck, use of agents to increase saliva production (for example, lemon drops), use of chewable aspirin, occupational exposure to acids, pregnancy-related morning sickness (Figure 4, page 1133) and excessive consumption of acidic food and drink have been associated with acquired dental erosion.[25-28] The use of an index can be helpful in identifying dental hard-tissue changes.[29-31] Researchers have suggested that different etiologic factors may modify the clinical appearance and pattern of tooth wear.[14,16] A careful review of oral hygiene practices also is necessary, because vigorous horizontal tooth brushing may result in abrasion that is markedly enhanced by the coexistence of enamel erosion.[32,33]

The focus in Western cultures on obtaining the perfect body results in a high value being placed on thinness, especially among young women, and is reflected in the number of reported cases of eating disorders. Eating disorders among men, triathletes, college students and even children as young as 5 years are being reported at an increasing rate.[4,34,35] These disturbing statistics reinforce the need for vigilance in identifying and assisting patients in combating eating disorders at an early stage.

The purpose of this article is to focus the attention of dental professionals on the characteristic oral pathoses associated with eating disorders, especially bulimia nervosa, as well as to suggest practical ways of opening a dialogue with patients about these disorders and assessing their readiness to change.[36-38] It is essential that dental professionals use the appropriate language and terminology at the initial dental visit if the patient is to be referred successfully to professionals specializing in the evaluation and treatment of eating disorders.

Dental planning must be aimed at treating existing erosive lesions and preventing further damage to oral tissues in a proven and effective manner. Comprehensive cosmetic restorative dental care will have the best prognosis if it is performed after psychiatric treatment has resulted in termination of the destructive behaviors.[13,17] In

Figure 1. Generalized enamel loss due to bulimic behavior.

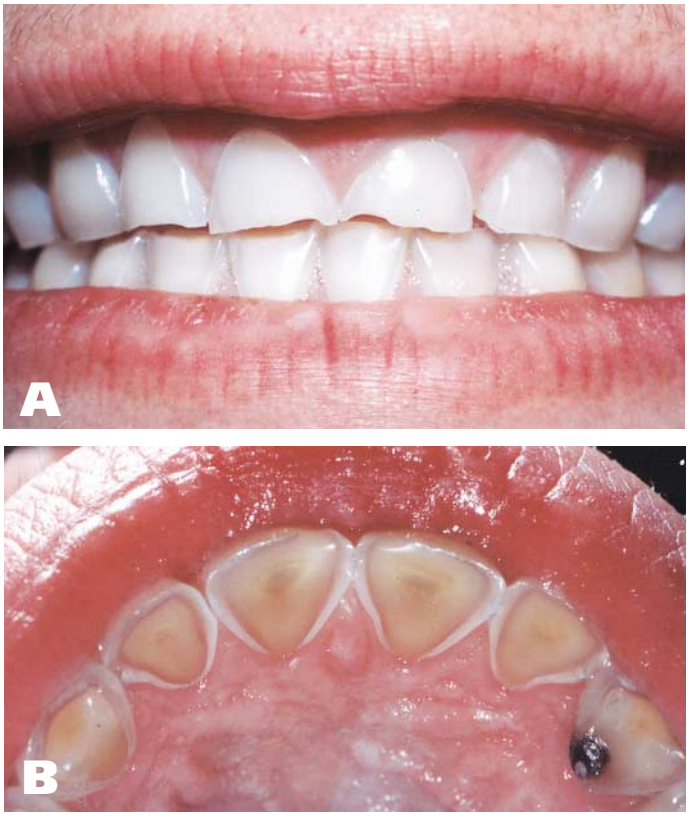

Figure 2. Severe loss of enamel due to long-standing bulimic behavior (Figure 2A reprinted with permission of S. Karger AG, Basel, Switzerland, from Roberts and Tylenda[18]).

this way, the dental practitioner becomes an important contributor to the recovery and long-term treatment of the patient with an eating disorder, as well as an integral part of the health care team in promoting behavioral change.[39,40]

In the section that follows, we offer examples of suggested dialogues that can be used with a patient who has dental tissue damage. The dentist should take a careful medical history, including current height and weight, weight change over time and any history of medically required or self-directed special diets. Women of child-bearing age should be asked if they are, or might be, pregnant. The clinician must develop a differential diagnosis of possible causes of the tissue damage. It is important for clinicians to address their findings with the patient after ruling out other erosion and attrition considerations and determining that an eating disorder is a clear possibility.

RAISING THE ISSUE OF A POSSIBLE EATING DISORDER

General recommendations. It is a good idea for clinicians to have brochures that address eating disorders made available to patients in the waiting area. The following are excellent resources for brochures and other supporting information:

- Gurze catalogues and brochures ("www.gurze.com" or 1-800-756-7533);
- Academy of Eating Disorders ("www.aedweb.org");
- National Association of Anorexia Nervosa and Associated Disorders ("www.anad.org/site/anadweb/").

In addition, it is imperative that the clinician be aware of local, regional and national resources, as well as referral alternatives, including specialists in the community who treat patients with eating disorders. These include counselors, psychologists, psychiatrists, registered dieticians and nutritionists. Hospitals also may sponsor eating disorder programs. Dentists can contact local medical, psychology and dietetic societies and public health departments to obtain names of health professionals in the community who treat patients with eating disorders.

Excellent Web sites to help in this regard include the following:

- American Anorexia/Bulimia Association ("www.aabainc.org");
- National Eating Disorders and Screening Program ("www.mentalhealthscreening.org").

Internet links for these and other organizations can be reached via "www.bulimia.com".

BEGINNING THE DIALOGUE

The following are specific steps for clinicians to consider when approaching a patient who is sus-

Figure 3. Enlarged salivary glands associated with bulimia nervosa (reprinted with permission of the publisher from Burke[22]).

pected of practicing bulimic behavior. If, at any time, the clinician achieves a completely open dialogue, he or she can modify some of the suggested steps below to fit the specific situation. Typically, the patient will not readily admit to having an eating disorder.

Step 1: plan the time element. The dentist should schedule a convenient time to discuss this issue. He or she may ask the patient to come in early in the morning or later in the day to allow sufficient time to address concerns.

Step 2: select the location carefully. The dentist should choose an office location that is comfortable for him or her and the patient. If the clinician has not seen the patient outside of the dental chair, it might be best to conduct this conversation with the patient in the dental chair and the dentist seated nearby. Also, it is important to select a location that is not in direct contact with

Figure 4. Incisal-edge damage to teeth nos. 8 and 9 in a patient with severe vomiting caused by morning sickness during the first four months of pregnancy. The patient brushed immediately after each episode.

other patients. This reduces the patient's concerns that the conversation may be overheard by other patients in close range.

Step 3: be aware of body language. It is important for the dentist to be aware of his or her body language. The patient may be apprehensive at the beginning of the dialogue. Start with a nonjudgmental opening such as, "This may be a little awkward for me to ask you these questions, but I am concerned about you." The clinician should not lean forward toward the patient, because he or she may perceive that the dentist is exerting pressure on him or her to provide immediate answers. It is important for the dentist to maintain a distance of about 2½ to 3½ feet between him or her and the patient. Moving in too close may elicit a sense of being trapped. For the dialogue to be effective, it is important for dentists to maintain a relaxed position, not cross their arms and maintain comfortable eye contact. (Because direct, constant eye contact can be intimidating, the dentist should focus on the patient's cheek area and make intermittent eye contact.)

Step 4: begin slowly. The clinician can begin by saying, "I have noticed some changes in your mouth, most specifically bruised areas in the roof of your mouth and throat, swelling of the salivary glands and loss of enamel from your teeth" (if the behavior has been occurring long enough to result in visible changes in hard tissue [that is, one to two years]). "Do you have any idea what might be causing this damage?" If the patient responds "No," then the clinician should proceed as follows. (If the patient responds "Yes," the clinician should

listen to his or her explanation of what he or she believes is the cause of the erosion.)

Step 5: suggest possible causes of damage. The dentist can suggest possible causes of enamel and soft-tissue changes. "The types of changes I see can be caused by extensive sucking on candies, gastric reflux, heavy consumption of soft drinks and juices, frequent self-induced vomiting, pregnancy or restrictive diets. Are any of these factors possibly relevant to you?" If the patient says "No," then the dentist should proceed to the next step.

Step 6: establish the patient's relationship with food. The dentist should introduce the possibility of an eating disorder. The following statement may be appropriate: "As you know, one of the main functions of the mouth is to ingest food. In my experience, many people in our society have complicated relationships with food. Because this can be a very private area, it usually is difficult for us to talk about those relationships. I would like to ask you some questions about your eating habits to help me better understand the changes I am seeing in your mouth. Would that be OK? I am not here to judge or change you, only to assist with your oral health. May I ask you questions about this?"

Pause and listen. The dentist should pause at this point and wait for the patient's response. He or she should assess the patient's emotional state and allow enough time for him or her to offer a clear response. The transtheoretical model is important here with regard to whether the patient is receptive to discussion and change. (This model describes various stages in people's readiness to make behavioral changes.)[36-38] At this stage, the practitioner should be able to assess the readiness of the patient to discuss the subject, the clinical/medical state of the patient and the pace the treatment needs to follow.

Step 7: establish the patient's body-image concepts. The dentist should begin with open-ended screening questions, such as the following:

- "How do you feel about your weight?"
- "Do you want to weigh less?"
- "How do you feel about your eating behavior in general?"
- "Have you ever eaten in secret?"

If the patient still does not acknowledge that he or she is engaging in bulimic behavior, then the clinician should take the next step.

Step 8: establish the patient's eating behaviors. The dentist should continue with questions that are more direct. Begin with a statement such as, "I would like to ask you some direct questions about your eating behaviors. These questions and your answers will help me determine if I might be able to establish a cause of the changes I see in your mouth. Please let me know at any time if you are uncomfortable with these questions.

- "Do you ever make yourself throw up?
- "Do you use laxatives or water pills, fast or exercise for multiple hours to help you lose and control your weight?
- "Has anyone expressed concern about your eating habits? If so, who and what are their concerns?
- "Have you had counseling or other psychological treatment, or have you seen a registered dietician for medical nutritional therapy or nutritional counseling?"

If the patient responds "No" to all of the above, then continue with the next step. (If the patient responds "Yes" to any of the above questions, the dentist should delve into his or her response and ask follow-up questions.)

Step 9: summarize and obtain permission to follow up. At this point, the dentist should thank the patient for being willing to talk about the issue. He or she can say, "I would like your physician to be aware of some of the changes I see in your mouth, as well as some of my concerns. Would you permit me to contact him or her?" (Confidentiality is important, and legally dentists must obtain written authorization from the patient to release any personal or medical information.) The clinician also should give the patient some pamphlets containing information about some of the possible causes of the changes observed in the mouth. Ask the patient, "Would that be OK? Do you have any questions for me?"

The clinician should be prepared for the patient to become defensive, which is a sign of a possible eating disorder. Whatever the patient's response, the clinician should remain calm, reassuring and supportive.

ADDRESSING THE PROBLEM

Community resources. If, during the initial screening, the patient admits to engaging in repetitive and self-induced vomiting, it is imperative that the dentist be aware of resources in the community to help with these problems. The clinician should compliment the patient on his or her acknowledgment of the problem and assess the

patient's readiness for medical treatment. However, the dentist must stress the importance of seeking assistance from qualified professionals whom he or she can recommend. If the patient is not ready to seek treatment, the dentist should let him or her know that this is his or her choice. However, the dentist also should express concern about the problem going untreated and ask the patient to contact the dental office when he or she is ready to seek help.

Follow-up dental visits. At subsequent dental visits, the dentist should ascertain the patient's readiness for change. He or she also should provide preventive dental care. If dental restorations and fixed prosthetics are indicated, the dentist should explain the hazards of providing such care while the patient engages in bulimic behavior. Such hazards include undermining the longevity of the restorations as a result of continued loss of tooth structure.

In the case of a minor, it is imperative that the parents be made aware of the patient's condition and its possible consequences to the child. The clinician may maintain confidentiality on a limited basis in cases of suspected bulimia. However, the best scenario is for the practitioner to counsel the child on how he or she can tell his or her parents, with or without the dentist's assistance. The immediate risk to the patient with anorexia nervosa warrants prompt attention because timely medical intervention is essential (as a result of the restricted food intake). In the case of a child with any eating disorder, parents have the right to know the clinical findings, and, ultimately, this information needs to be given to them.

The dentist must stress the importance of seeking assistance from qualified professionals.

Subsequent visits. If the patient does not return to the practice for treatment, it is possible that the dentist has planted a seed that may come to fruition months or years later when the patient is ready to acknowledge and deal with the eating disorder. In relationship to the transtheoretical model, the patient could be in the precontemplative stage and may not be ready to make a change.[38]

This transtheoretical model, developed by Prochaska and DiClemente,[38] is instrumental in assessing changes in health behavior. The stages of change described by these authors reflect the view that health behavior occurs in phases; as new information is gained, the patient weighs the pros and cons and thinks about his or her behavior. In an early stage, such as precontemplation, the patient may be thinking of seeking help but is not ready to do so. New information and the practitioner's expressions of concern may lead to the subsequent model stages, and the patient may progress to actively wanting to make the behavioral change.

He or she may be willing to discuss further action if he or she decides to return to the practice. If the patient does return, the clinician can gently refer back to the earlier conversation and ask the patient if he or she has experienced any other changes since the last time they spoke. The clinician also might share pieces of any conversations he or she may have had with the patient's physician (that is, if the patient has provided written authorization for the dentist to contact the physician).

PREVENTING FURTHER ORAL TISSUE DAMAGE

We provide the following suggestions to help patients who have an eating disorder minimize the enamel loss and soft-tissue damage associated with this disorder. However, it is important to stress that these recommendations are only short-term aids, and it is imperative that patients seek assistance in discontinuing self-induced vomiting and other bulimia-associated practices.

The dentist should emphasize the importance of regular recall visits to monitor hard-tissue loss and soft-tissue lesions, as well as for restorative/periodontal health considerations. He or she should consider using models and intraoral photographs. In addition, periodic weight documentation and clinical observation of the patient are important.

The dentist can provide the patient with custom-made trays and 1.1 percent neutral fluoride gel. The patient should use the trays for five minutes daily. A good time is while taking a shower.

Other suggestions include the following.

- After vomiting, the patient should rinse with 1 teaspoon baking soda mixed with 8 ounces of water. This will help neutralize the hydrochloric stomach acids that damage tooth enamel. If baking soda is not available, the patient should rinse with plain water to minimize the acidity.

- Rinsing daily with 0.5 percent fluoride will help harden the enamel against acid dissolution.
- The patient should not brush the teeth for at least one hour after vomiting. On the other hand, rinsing after vomiting is crucial to reduce the acidity and minimize enamel loss.
- Dentists should instruct patients in proper tooth-brushing methods (using a soft-bristle toothbrush) to minimize enamel loss.
- Dentists should instruct patients in how to use a tongue cleaner and stress the importance of brushing the tongue thoroughly to remove acid residue that collects in the papillae after vomiting.
- Dentists should encourage patients to drink water throughout the day to decrease the acid content in the mouth.
- Dental professionals should minimize the use of abrasive materials in dental hygiene procedures that involve scaling and polishing. A fluoride toothpaste may be used as a polishing agent.
- Patients need to be educated about the importance of eating healthful snack foods. Cheese, fruits, vegetables and other nonacidic foods that do not contain added sugar are important to good oral and general health.
- To promote salivary flow, dentists should encourage patients to consume sugarless gum and mints, especially those sweetened with xylitol.
- Dentists should suggest that patients use a straw when drinking any acidic beverage such as fruit juice or carbonated beverages. Doing so will direct the acid toward the roof of the mouth and away from the teeth.

DISCUSSION

Approaching a patient who is suspected of having an eating disorder often is difficult for the dental practitioner, and the most effective language to use has not been addressed adequately in the literature. Once the problem has been confirmed, the dentist may use the suggested steps to assist the patient in treatment, prevent further damage to hard and soft tissues and repair the existing damage to the teeth. The dental practitioner plays an important role in the patient's recovery and attainment of optimal health.

Erosion caused by repetitive vomiting often is confused with other types of erosion of the hard and soft tissues that, on initial examination, can appear similar. In many instances, the dental professional's recognition of erosion caused by bulimic behavior may be the first indication that the patient needs psychological and medical intervention. This is especially important for children and adolescents, who are at risk of damaging their general health if the eating disorder is not recognized and effective therapy is not initiated.

In the past few years, focus has been placed on documenting clinical findings, and serial oral photographs or models have been suggested as a way to identify oral changes. Such documentation can be an effective tool for demonstrating the soft- and hard-tissue changes to the patient and his or her parents, when appropriate. When monitoring enamel loss, practitioners often find it difficult to detect subtle changes or to rely on memory or even notations in the patient's dental records. Consequently, monitoring changes in hard tissue and soft-tissue lesions is enhanced by using intraoral photography.

CONCLUSION

We have suggested an approach to opening a dialogue with a patient who is suspected of having an eating disorder that is affecting the oral soft and hard tissues. Initiating such a discussion often is a difficult step in offering assistance to patients. Each practitioner has his or her own style of engaging patients in dialogue. However, we have provided a script that practitioners can use as a guideline in beginning this interaction.

We have emphasized the importance of seeking professional assistance in changing patients' destructive behaviors. In addition, we provided an educational and oral health management protocol to minimize further loss of enamel and soft-tissue destruction. We suggest that case studies be conducted to assist dentists in addressing the rehabilitation issues faced by patients who have experienced hard-tissue loss as a result of an eating disorder. ■

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