

CASE REPORT



Pica: Dental findings of an uncommon eating disorder in two clinical case reports

Bruna Luiza Roim Varotto¹, Rafael Lodi², Samanta Pereira De Souza³, Rita De Cássia D'Ottaviano Nápole¹, Reynaldo Antequera¹

¹Dental Team, Psychiatric Institute of the Medical School of Universidade de São Paulo, São Paulo, Brazil, ²Dental Team, Patients with Special Needs and Hospital Dentistry, Psychiatric Institute of the Medical School of Universidade de São Paulo, São Paulo, Brazil, ³Dental Team, Psychiatric Institute, Clinical Collaborator with AMBULIM (Eating Disorder Program), Psychiatric Institute of the Medical School of Universidade de São Paulo, São Paulo, Brazil

Correspondence

Bruna Luiza Roim Varotto, Psychiatric Institute of the Medical School of Universidade de São Paulo, Rua Dr. Ovídio Pires de Campos, 785, 05403-000, Caixa Postal 3671, Cerqueira César, São Paulo, Brazil. Phone: +55-11-2661-6498. E-mail: bruna.varotto@hc.fm.usp.br

Received 15 May 2018;

Accepted 18 June 2018

doi: 10.15713/ins.ijmdcr.90

How to cite the article:

Varotto BLR, Lodi R, De Souza SP, Nápole R, Antequera R. Pica: Dental findings of an uncommon eating disorder in two clinical case reports. Int J Med Dent Case Rep 2018;5:1-4.

Abstract

Aim: In this paper, we report two cases of patients diagnosed with pica, an uncommon eating disorder, and the dentistry implications of this psychiatric disorder. **Background:** Pica is a psychiatric disorder characterized by persistent ingestion of nonnutritive and/or nonfood substances. Dental implications caused by this condition depend on the substance ingested and the patterns of chewing; however, it is rare in the literature descriptions of dental complications of pica disorder. **Cases Report:** (1) Patient, female, with pica and borderline personality disorder was referred to treatment at the dental service of a psychiatric institute. The patient presented tooth fractures and mucosal lesions. The treatment included dentin tooth sensitivity control, control of traumatic lesions in mucosa, and composite restorations. (2) Patient, female, with pica and bulimia nervosa, referred pain in the temporomandibular joint. The case discusses the value of anamnesis and a proper clinical examination. **Conclusions:** Through the case reports we concluded that the dentists should be aware of the oral manifestations of this disease. **Clinical Significance:** The performance of the dental team is of great value to the diagnosis of pica and fundamental during their treatment and rehabilitation.

Keywords: Dental service, dentistry, feeding and eating disorders, hospital, pica

Introduction

Pica is a psychiatric disorder characterized by persistent ingestion of nonnutritive and/or nonfood substances. Its name comes from the Latin and refers to a bird with peculiar behavior characterized by not discriminate nutrients of nonnutritive objects.^[1] Pica is classified within DSM-5 as Feeding and Eating Disorders. It is characterized by persistent eating of nonnutritive substances and/or nonfood, for a minimum period of 1 month in patients over 2 years old.^[2] The diagnostic criteria are described in Table 1.

The literature dates as the most common appetite changes found in this condition: Ice ingestion,^[1] clay ingestion, and cornstarch intake.^[3,4] The concept of pica can be expanded beyond the unusual intake of nonnutritive substances, but also considering the intake of food in unusual ways, such as frozen foods or raw grains.^[1]

Data on the prevalence of pica are still not concrete. The reluctance of patients to recognize and report the practice to the health team makes it a likely underdiagnosed and underreported condition.^[5-7] The practice of pica is often observed in children, pregnant women, and individuals with mental disabilities.^[8-11]

25–33% of children and youth have the nonfood substances intake habit, but as they develop, they usually leave the practice, not persisting with this during adulthood.^[3] This is the most observed eating disorder in patients suffering from a mental disability, occurring in about 10–15%.^[8,9] About 20% of pregnant women go on to develop the practice during pregnancy.^[10,11]

The most common consequence of pica is the poisoning, but several problems in the gastrointestinal tract may occur, including obstructions, perforations, ulcers, and constipation.^[11] When the intake is preferably foreign bodies, the life of the patient is often jeopardized. Usually, the objects pass through the entire digestive tract until be eliminated in 75–90% of occasions. Other 10–20% of cases require removal by an endoscopic method, and only 1.0–4.8% will require some type of surgery for foreign body extraction or correct any related complications.^[12,13]

The oral cavity may also suffer from negative effects of pica. As the systemic, the dental implications caused by this condition depend on the substance ingested and the patterns of swallowing or chewing. Injuries in oral mucosa and dental abrasion fractures are the most frequent oral complications. It is rare in the literature

dental complications of pica disorder. There is a case report of a woman of 56 years old, who had a habit of biting and chewing stones and sand. This practice resulted in extensive and widespread loss of tooth structure.^[14]

These are two case reports of the dental outcome of two patients with pica, exemplifying the dental implications of this disorder and the importance of the dental treatment in a multidisciplinary approach.

Case Reports

Case 1

A female patient, 25 years old, in psychiatric treatment for Borderline Personality Disorder and Pica referred to dentistry team complaining of dental fracture after metal rod swallowing. Intraoral examination revealed an enamel-dentin fracture of the incisal third of the upper central incisors and traumatic ulcerative lesions in the soft palate and palatoglossus arc.

Psychiatric symptoms began, in 2010, with the reduction of food intake and the indiscriminate use of laxatives. In this period, the patient was hospitalized for a month for treatment of anorexia nervosa. When the anorexic frame appeared controlled and about to be discharged, the patient began to systematically refer suicidal ideation and desire to keep hospitalized. For lack of criteria to justify such conduct, the medical team denied the continuity of admission.

The first intake of objects held at this time. The patient swallowed seven coins, and for this reason, was hospitalized for endoscopic removal since then this habit has become frequent. She shows a preferred intake of metal and sharp objects such as umbrella rods, needles, metal rods, scalpel blades, forks, spoons, and among others. At present, the patient, swallows around two objects to 3 times a week, being subjected to endoscopic or surgical procedures to remove these with the same frequency. Several psychiatric hospitalizations occurred since the first episode to control impulsive behavior and possible suicidal ideation. At present, the patient is semi hospitalized in a psychiatry hospital in psychiatric and multi-professional attendance.

During the interview, in the dental appointment, the patient was eupneic, afebrile, with intact skin, normal colored, and symmetrical face when questioned, denied any comorbidity or habits.

The intraoral physical examination showed incomplete permanent dentition, the absence of one upper element and satisfactory oral hygiene. It was possible to observe the fracture of the incisal edge of the maxillary central incisors, with dentin exposure. The lower molars presented occlusal composite restorations, all functional and aesthetically satisfactory, as seen in the panoramic radiography as well [Figure 1].

The approach adopted was the restoration of those fractured elements with composite without any other condition that would arouse dental treatments, the patient was discharged on the same session.

A week after the first procedure the patient returned with a fracture of the restorations of the same dental elements. We repeat the restorative procedure without conduct disorder. Failure was repeated 6 times over a period of about 1 year [Figure 2], totaling eleven restorative procedures under the same conditions.

Occasionally, since the dental team accompanies her were noted traumatic lesions in oral mucosa, probably caused by the very habit of swallowing objects, or even the procedures to which the patient is subjected to removal [Figure 3].

Case 2

A female patient, 24 years old in medical treatment of Pica and Bulimia Nervosa, went to the Dentistry Team, with complaints of dental sensitivity, blemishes and anterior dental fractures [Figure 4] and pain in the region of temporomandibular joint (TMJ) and adjacent bilateral muscles. She reported pain in TMJ region and adjacent bilateral muscles 3 years ago - time when Pica's frame started with ingestion of bricks, cement, and earth. The pain occurred 2–3 times a week, lasted for hours and occurred during the chewing of hard foods of moderate intensity. She had the feeling of the tired face when she had to chew, talk, and smile. She denied night bruxism but referred to daytime clenching. She heard noises (crackles and squeaks in TMJ) when opening her mouth, chewing, and talking. The patient referred headaches in the frontal and occipital region.

Table 1: Diagnostic criteria for pica according to the Association of American Psychiatric, 2013

Diagnostic criteria for pica (DSM-V)

A	Persistent non-nutrient intake of substances for a minimum period of 1 month.
B	No relation to the individual level of development.
C	Eating behavior is not a part of any practical culturally acceptable.
D	If the eating behavior occurs exclusively during the course of another mental disorder (e.g., mental retardation, pervasive developmental disorder, and schizophrenia), it is severe enough to warrant independent clinical attention.



Figure 1: Case 1 - Panoramic radiography. Fracture of upper central incisors



Figure 2: Case 1 - Clinical evaluation, fracture of upper central incisor



Figure 3: Case 1 - Injuries on soft palate and palatoglossus arc

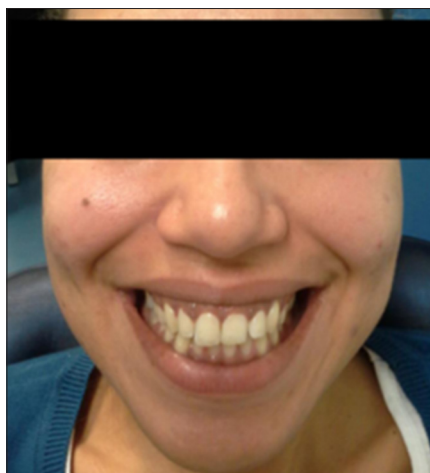


Figure 4: Clinical evaluation of anterior dental fractures

There was no dental wear and no middle line deviation. The oral opening pattern was straight, reaching 37 mm without

assistance and 39 mm with assistance - both with bilateral muscular pain but without joint pain. No joint noises in the opening, closing, or protrusive opening and no pain during joint palpation and intraoral muscles, but presented pain at various intensities during extraoral muscle palpation. The lateral excursions were of 8 mm (right and left), with the absence of muscular or articular pain during the movements. She presented intact restorations and caries lesion on teeth 27 and 37. There were no alterations in panoramic radiography. The diagnostic hypothesis is of muscular TMD due to the diurnal tightening associated with the pica and bulimia nervosa.

Discussion

In the case 1, the patient initiated the ingestion of objects to avoid medical discharge. This goes against what has been described in the literature that many patients would find it difficult to speak openly about this habit for health teams.^[2,5-7] The personality disorder may play a role in this pattern.

The frequency of the composite fractures in anterior teeth was high above descriptions in literature.^[15] The dental team was careful to identify the causes of these failures. We called attention to the proximity between the events of endoscopy and dental fractures. The patient attended in dental urgency for the restoration of anterior teeth just days after endoscopies. The main hypothesis, and that we deal with at the moment is that the trauma caused by oral endoscopy or intubation, and the use of instruments such as the laryngoscope can traumatize the anterior teeth during the procedure, causing recurrent fractures.

Lesions on the mucosa of the palate were monitored and received symptomatic treatment. The use of anesthetics to promote feeding was sparingly used since analgesia could favor the patient to return to swallow other objects and traumatize the region again.

Pain can also be the chief complaint of patients with pica. The habit of chewing hard substances could overload the joint, causing soreness in masticatory muscles and TMJ. Often, masticatory muscles pain can mimitize headaches, causing confusion in the diagnosis and treatment. Once the diagnosis is done, the approach aimed at patient orientation and incentive to treatment seemed useful to manage this case.

Conclusion and Clinical Significance

It can be seen from these reports that pica causes several oral implications of dental interest. Dentists should be vigilant in cases of excessive dental abrasions, recurrent fractures of anterior teeth composites and traumatic lesions on the palate, especially when associated with TMJ pain. In these cases, treatment includes control of dentin hypersensitivity, symptomatic control of traumatic lesions in mucous membranes, and fillings. A treatment involving several specialties may be valid for the rehabilitation of these patients. Whatever the dental specialty, for the good progress of the case it is fundamental that professionals

understand this condition, create an empathic environment with the patient and pay attention to the possible signs of the disease.

References

1. Mishori R, McHale C. Pica: An age-old eating disorder that's often missed. *J Fam Pract* 2014;63:E1-4.
2. American Psychiatry Association. *Diagnostic and Statistical Manual of Mental Disorders-DSM-5*. 5th ed. Washington DC: American Psychiatry Association; 2013.
3. Boyle JS, Mackey MC. Pica: Sorting it out. *Transcult J Nurs* 1999;10:65-8.
4. Wakham MD, Burtner AP, McNeal DR, Garvey TP, Bedinger S. Pica: The peculiar behavior with oral involvement. *Spec Care Dent* 1992;12:207-10.
5. Kachani AT, Cordás TA. From opera buffa to nosological chaos: Pica. *Rev Clin Psiq* 2009;36:162-9.
6. Liu YH, Pesch MH, Lumeng JC, Stein MT. Pica in a four-year-old girl with global development delay. *J Dev Behav Pediatr* 2015;36:758-60.
7. Tokue H, Takahashi Y, Hirasawa S, Awata S, Kobayashi S, Shimada T, *et al.* Intestinal obstruction in a patient mentally retarded due to bites. *Ann Gen Psychiatry* 2015;31:14-22.
8. Santos AM, Benute IB, Santos NO, Nomura RMY of MCS Lucia, Francisco RPV. Presence of eating disorders and its relationship to anxiety and depression in pregnant women. *Midwifery* 2017;51: 12-15.
9. Gravestock S. Eating disorders in adults with intellectual disability. *J Intellect Disabil Res* 2000;44:625-37.
10. Roy A, Fuentes-Afflick E, Fernald LCH, Young SL. Pica is prevalent and strongly associated with iron deficiency among hispanic pregnant women living in the united states. *Appetite* 2018;120:163-70.
11. Jackson WC, Martin JP. Amylophagia presenting as gestational diabetes. *Arch Fam Med* 2000;9:649-52.
12. William EA, Ratzek R. Eating disorder not otherwise specified (Pica): Ingestion of plastic bags in an attempt to slim down resulting in acute abdomen. *Rev Deb Psiq* 2015;3:32-35.
13. Simpson E, Mull JD, Longley E, East J. Pica during pregnancy in low-income women born in Mexico. *West J Med* 2000;173:20-4.
14. Barker D. Tooth wear as a result of bites. *Br Dent J* 2005;199:271-3.
15. Collares K, Opdam NJ, Laske M, Bronkhorst EM, Demarco FF, Correa MB, *et al.* Longevity of anterior composite restorations in a general dental practice-based network. *J Dent Res* 2017;96:1092-9.

This work is licensed under a Creative Commons Attribution 4.0 International License. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in the credit line; if the material is not included under the Creative Commons license, users will need to obtain permission from the license holder to reproduce the material. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/> © Varotto BLR, Lodi R, De Souza SP, Nápole R. 2018