There are many mental and behavioral disorders, being necessary to understand and differentiate them and their nuances for better care and dental care. This chapter will address depression, bipolar affective disorders, schizophrenia, and attention deficit hyperactivity disorder related to oral-dental care and repercussions such as reduced salivary flow due to depression and/or medication action. In general, anxiolytics and antidepressants are used. This salivary reduction contributes to the high rate of dental caries and periodontal diseases, favors the emergence of fungal infections and makes the oral mucosa fragile and susceptible to ulceration and trauma. Health promotion, including individual and collective actions, for prevention and early detection of oral lesions and oral cancer, restorative, anatomical, biological, functional and aesthetic oral care are necessary and contribute to the improvement of the quality of life of these patients. The worst dental condition found in patients with mental disorders may be related to the symptoms and characteristics of their own psychiatric condition, the effects of medications, but also to the stigma that permeates society and the patient himself. Thus, it is imperative to eliminate this stigma in order to favor the recovery and maintenance of oral health and, consequently, the quality of life of these patients.

**Keywords:** Mental and behavioral disorders, Oral health, Comprehensive care.
INTRODUCTION

In Brazil, prior to the psychiatric reform, which occurred in the mid-1970, the model of care provided to the mentally ill was hospital-centered, focusing only on the biological dimension of the individual and on technical-scientific knowledge. The asylum model was predominant, where the treatment offered to the patient was limited to prolonged hospitalizations, keeping the individual away from society and the Family (JORGE et al., 2011; WAIDMAN; JOUCLAS; STEFANELLI, 2002).18,36

Overcoming the asylum model has been happening day by day, through the replacement of hospices by the mental health care network, Consisting of Psychosocial Care Centers (CPCC), Therapeutic Residential Services (TRS), Living Centers, Health Outpatient Clinics Mental and General Hospitals, whose main proposal is to make use of new therapeutic measures and psychosocial practices that aim to keep the user with mental illness with the family, avoiding the abandonment of these patients by their families and seeking the recovery and inclusion of these individuals in society. Thus, ensuring to the patient humanized treatment, focused not only on the biomedical model, but also on the psychosocial component involved 1,6(AMARANTE, 2007; BRASIL, 2005).

According to the World Health Organization (WHO), Mental and behavioral disorders are classified as a condition resulting from psychological impairment associated with functional impairment due to some biological, social, psychological, genetic, physical or chemical dysfunction. Another classification, they explain that should also be understood as changes in thinking and / or mood associated with expressive anguish, causing severe and permanent disabilities that increase the demand on health services (SANTOS; SIQUEIRA, 2010).30

It is now known that mental illness has long been underestimated due to low mortality rates, however, it affects people of all ages causing long-term disability, reducing the quality of life of individuals (SANTOS; SIQUEIRA, 2010).30

Among all existing psychic disorders, this chapter will address depression, bipolar affective disorders, schizophrenia and attention deficit hyperactivity disorder (ADHD) as can be seen from case reports and literature review.

Schizophrenia and schizophrenic disorders are a group of severe mental disorders, without pathognomonic symptoms, but characterized by early impairment, thought and perception distortions, reasoning disorders, affective abnormalities with cognitive impairment over time. The treatment of this disease is based on antipsychotic drug use and psychosocial therapy (SOUZA, 2016). In addition, schizophrenic patients have poor oral health related to psychosocial factors (CAMPOS et al. 2009).

Depression is a relatively common psychiatric disorder that affects for a long time the mood, thoughts and behavior of the individual. It is characterized by agitation, sadness, anxiety, lack of interest, feeling of guilt, suffering, social withdrawal and feeling of aging. The treatment of depression also requires the combination of medications, which generate side effects of dental importance, such xerostomia, taste alteration, periodontal disease. Thus, it is up to the dentist to be aware of the symptoms and peculiarities of depressive patients, guiding them to seek medical help (CAMPOS et al. 2009).

Bipolar affective disorder (BAD) is a recurrent, chronic, severe disease and a major cause of disability for both men and women worldwide, causing a significant impact on the quality of life of patients in the social, professional or academic sphere (COSTA , 2008; LEE; CURATOL; FREDSICH, 2000). Regarding the oral health of individuals with BAD, Cunha (2016) study found that there is a strong association and high prevalence of periodontitis in these patients and this was significantly associated with the use of some antidepressant medication.
Attention deficit hyperactivity disorder (ADHD) is a neurobehavioral disorder with genetic influence of unknown etiology that commonly occurs in childhood and may manifest itself into adulthood (OLIVEIRA, 2013). ADHD is characterized by varying degrees of inattention, hyperactivity, and impulsivity (ANGRA et al. 2011). Recent studies have analyzed the oral health status of patients diagnosed with ADHD, in which the ADHD group was found to have a higher prevalence of alveolar trauma, a higher incidence of bruxism, and a higher risk of developing carious lesions and gingival bleeding, mainly due to the lack of oral hygiene (ANGRA et al. 2011; OLIVEIRA, 2013).

Thus, it is necessary that the dental surgeon be able to identify mental disorders, be able to use behavioral management techniques that facilitate the clinical approach, avoiding the accentuation of these patients' anxiety regarding care, and establish a dental treatment plan differentiated, mainly encouraging care with oral hygiene in view of the peculiarities of these disorders (OLIVEIRA, 2013).

THE SOCIAL STIGMA AND THE ORAL CONDITION

Social stigma is the negative distinction of members of society endowed with some condition or particularity, capable of causing social discrimination and exclusion. This type of attitude is very common against patients with a mental disorder such as schizophrenia, depression, bipolar disorder, and attention deficit hyperactivity disorder (ADHD) (NASCIMENTO; LEÃO, 2019).

Violence is one of the main stereotypes related to mental disorders. Despite knowledge about the neurobiology of psychiatric illness, the desire to stay away, the perception of danger, the sense of pity and discrimination are reactions found in the general population (PELUSO; GLAY, 2011).

Internalized stigma, or self-stigma, is a direct consequence of social stigma, in which an individual's internal derogatory and discriminatory attitudes occur. Thus, there is compromised self-esteem, arises the feeling of guilt, anguish, anger and disapproval, causing clinical worsening and treatment abandonment (NASCIMENTO; LEÃO, 2019).

The stigma associated with mental illness encompasses the patient, their family, psychiatric institutions, and health teams, which causes social exclusion and an obstacle to patient recovery and rehabilitation. Regarding the oral health of these patients, social stigma hinders the search for dental care, prevention and treatment of conditions in the early stages (NASCIMENTO; LEÃO, 2019).

Patients with psychiatric disorders are affected by various oral changes due to an association of various factors. Among these factors, we highlight the lack of hygiene habits, psychomotor damage, decreased salivary flow and difficulty in accessing dental services (CARVALHES, 2014).

In a study of patients with schizophrenia, bipolar disorder, depression, and other personality disorders, 78% of patients always reported oral pain due to poor oral condition. They presented moderate degree of gingivitis and very decayed, lost and filled teeth index (DMFT), mainly due to the extracted and decayed teeth (CARVALHES, 2014).

In the same vein, Jamelli et al. (2010) showed a very high DMFT index with an average of 27.8 for men and 26.6 for women, especially due to extracted teeth. It was also found in this study prevalence of periodontal disease and need for dental prostheses, especially total dentures, indicating the high rate of edentulism in these patients.

Salivary flow reduction is also common in patients with psychiatric disorders, and it can be triggered by the very shaken psychological condition and depressive symptoms, as well as by the action of the medications generally used, anxiolytics and antidepressants. This salivary reduction contributes to the high rate of caries and periodontal diseases, favors the emergence.
of fungal infections and makes the oral mucosa fragile and susceptible to prosthetic ulcerations and trauma.\(^4\)\(^{20}\) (KURIHARA et al. 2013; BERTAUD-GONOUT et al. 2013).

Oral lesions are also common oral manifestations in these patients. Studies conducted with patients with psychiatric disorders have found oral ulcers, oral candidiasis, leukoplakia, frictional keratosis, inflammatory fibrous hyperplasia, mucocele, fistulas and others.\(^4\)\(^{15}\) (BERTAUD-GONOUT et al. 2013; HAAS; ALVES; ROCHA 2009).

Occurrences of these injuries are generally associated with trauma resulting from psychomotor alterations, hyposalivation, use of poorly adapted prostheses, poor dental hygiene and lack of dental care. Health promotion, including individual and collective actions, for prevention and early detection of oral lesions and oral cancer are necessary and contribute to improving the quality of life of these patients.\(^3\)\(^\)\(^8\)\(^\)\(^{35}\) (CARVALHES, 2014; ATTY et al, 2012; VIDAL et al, 2018).

Psychiatric disorders, mood swings, stress and anxiety may trigger bruxism and predispose temporomandibular disorders. Studies with patients with schizophrenia, depression, obsessive compulsive disorder, bipolar disorder, and other psychiatric disorders have revealed bruxism associated with the diagnosis or use of medications.\(^9\)\(^{37}\) (WINOCUR et al. 2007; CARVALHES, 2014).

A study on Attention Deficit Hyperactivity Disorder (ADHD) has shown its association with poor school performance and the presence of oronasal breathing in children and adolescents (VERA et al. 2006).\(^33\) In addition, Costa (2007)\(^10\) noted that treatment for mouth breathing was effective in decreasing ADHD symptoms, so the presence of mouth breathing in these patients should be investigated and managed to contribute to the improvement of ADHD treatment.

It can be inferred that the worst dental condition found in patients with mental disorders may be related to the symptoms and characteristics of their own psychiatric condition, the effects of medications, but also to the stigma that permeates society and the patient himself. Thus, stigma becomes a major obstacle in the recovery, maintenance of quality of life and oral health of these patients (NASCIMENTO; LEÃO, 2019).\(^25\)

\section*{MOST COMMON ORAL AND DENTAL HEALTH ISSUES IN PEOPLE WITH MENTAL AND BEHAVIORAL DISORDERS AND THE DENTAL CARE}

Some indices are used in dentistry to check oral health. These include the Decayed, Lost, Obtained Teeth Index (DLOT), the Periodontal Community Index (PCI), and the Plaque Index (PI). Velasco-Ortega et al. (2013)\(^32\) and Jovanovic et al. (2010)\(^19\) used these indices in their different studies to evaluate two groups of patients, one with psychiatric disorders and the other without psychiatric disorders. They concluded that patients with psychiatric disorders had a high rate of caries, periodontal disease, and plaque compared with patients without psychiatric disorders.

Patients with psychiatric disorders often make use of psychotropic drugs to control their changes. The study by Bertaud-Gounot et al. (2013) showed that psychiatric patients among them schizophrenic, with mood changes, among other psychiatric diseases, using sedatives and antidepressants presented alteration / decrease in salivary flow. They concluded that high rates of caries and periodontal disease are directly linked to decreased salivary flow caused by the medications used and the altered psychological condition.

Routine use of psychoactive drugs causes reduced salivary flow, but also affects motor coordination, making oral hygiene difficult (HAAS et al., 2009).\(^15\)

Morales-Chavez et al. (2014)\(^24\) evaluated 56 titled patients with diagnoses of schizophrenia (60%), behavioral mental disorders (3.07%), bipolarity (12.30%), organic psychosis (13.86%)
and dementia (10.76%). The drugs they used were anxiolytic, antipsychotic, neuroleptic, anticonvulsant and antiparkinsonian. They noted that these drugs may cause hyposalivation (9.2%) or sialorrhea (38.4%), increased risk of periodontal disease, tooth decay, temporomandibular disorders and increased disease such as candidiasis. They then realized that the oral health of psychiatric patients is generally more affected than the rest of the population, because they have poor oral hygiene and take various medications that affect the flow of saliva and oral mucosa.

Bruxism is also a frequently reported disorder in psychiatric patients, which may be caused by psychiatric medications (MANFREDINI et al., 2004; WINOCUR et al., 2007). Carvalhes (2014) evaluated 50 patients with mental disorders such as schizophrenia, affective mood disorders (bipolarity and depression), and adult behavior personality disorders, among others, who were using psychotropic drugs. Most used more than two associated psychotropic medications. It was found in this study that patients had bruxism (56%) caused by these drugs.

Medical and dental care for the mentally handicapped has some characteristics of its own. This is due to certain difficulties and limitations that these patients usually have. Some require special care measures, while others may be treated conventionally (OLIVEIRA; PAIVA; PORDEUS, 2004). Patient management must respect their physical and psychological limitations. One of the most challenging situations in care concerns the management of behavior during clinical practice. This requires not only technical-scientific knowledge but also sensitivity in order to understand the individual yearnings of each patient, as well as his family, in order to determine the best way to conduct treatment. During dental treatment, communication between the patient and the professional is fundamental, with the purpose of establishing a relationship of trust between them, which is built by a dynamic process of dialogue and facial expression (ELIAS, 2007).

Approach techniques greatly benefit the dental treatment of the mentally handicapped person, favoring communication, control of anxiety, fear and pain. Among the most common approaches to conditioning we can mention:

Distraction: Distraction can be done by talking about a subject or topic that interests the patient, a song, interesting stories, or even a short rest.

Say/Show/Do: It consists of showing the dental instruments and equipment, explaining the procedure that will be performed and then performing it. It is important that the professional is not dressed in the first contact and thus gradually presents the personal protective equipment. Instrumentals should also be shown starting with those that generate low anxiety for those with higher levels. This technique is most commonly used in patients able to absorb information.

Modeling: In this technique the patient observes the dental treatment of a model and is then encouraged to perform the same action. The model used may be someone else, or a family member, or a doll, or even a movie showing other positive behavior patients being treated.

Positive Reinforcement: It consists in gratifying the patient when he / she presents a desired behavior, thus motivating its repetition. It should be performed immediately after the positive attitude, so that the patient clearly identifies the desired behavior.

Voice Control: Consists of clear, concise instructions through short, direct sentences performed by changing the volume, rhythm and tone of the voice. After getting the patient’s attention the dentist should return to his normal tone of voice. It is important to clarify parents in advance the need to use this behavior management.

For dental care to patients with severe mental deficit or involuntary movements, it is sometimes necessary to have different containment techniques. The goal is to keep the patient in the
dental chair in favorable conditions for the proper execution of treatment. The purpose is to restrict movement without causing pain or injury. Containment, by whatever method, also aims to protect the patient, as involuntary or aggressive movements during dental treatment are risk factors for iatrogenesis and make the procedures very difficult to perform.

The team must be trained to carry out containment so as to act in a coordinated and calm and secure manner. The contained patient should be continually observed by staff throughout the service. It is important to stress that physical restraint should not be viewed as punishment, but as a form of protection, and by itself promotes relief in agitation, causing a relaxation of the special patient (HADDAD; SANTOS, 2003)\(^\text{16}\).

Given the significant number of oral alterations these patients present, especially those influenced by the medications normally used by this population, this group of individuals still faces great difficulties in accessing dental treatment. These can be represented by several factors, such as the region where they live, demand for vacancies, the specialty of professionals working in the service, referral of another professional, access to the place of care, accessibility to transportation, cost of treatment and social aspects of the patient and his family (OLIVEIRA et al, 2008)\(^\text{27}\).

It is the responsibility of the dental surgeon to be informed about the systemic conditions of his patients and prepared to adapt them to a specialized dental care protocol, which usually requires more personalized attention due to the possible complicating factors of oral health resulting from systemic treatments (MEDRADO; SILVA; WANDERLEY, 2015)\(^\text{23}\). As can be seen from the case reports below.

Ethical Considerations - The patients, family members and guardians of the following cases signed the Informed Consent Form, consenting to the disclosure of data, information and images for academic, scientific purposes. (CAAE: 07264818.7.0000.5207).

Figure 1 - Clinical aspect of ulcerated, lesion involving anterior inferior alveolar ridge and lingual floor. Collection of the odontology service of the Oncology Center of the Oswaldo Cruz University Hospital / University of Pernambuco - CEON/HUOC/UPE.
Figura 2 - Clinical aspect of total regression of upper arch injury after 45 days. Collection of the odontology service of the Oncology Center of the Oswaldo Cruz University Hospital / University of Pernambuco - CEON / HUOC / UPE.

Figure 3 - Clinical aspect of the 80% regression of the lower arch injury after 45 days. Collection of the odontology service of the Oncology Center of the Oswaldo Cruz University Hospital / University of Pernambuco - CEON / HUOC / UPE.

CASE REPORT 1 - NML, 53 years old, male, single, non-smoker, non-alcoholic, from Afogados da Ingazeira, PE, was referred from the Basic Health Unit (BHU) to the Dentistry Service of the Hospital Oncology Center Oswaldo Cruz University, University of Pernambuco - CEON/HUOC/UPE for investigation of oral lesions suggestive of cancer. On intraoral clinical examination, total edentulism, bone loss, absence of dental prostheses and two oral lesions were observed: one involving anterior inferior alveolar ridge and
lingual floor, 4cm, ulcerated, raised edges, not hard to palpation with painful symptoms; another identical in anterior superior alveolar ridge, 2cm. (Figure 1) A parafunctional habit of repetitive bite was identified, as well as attention and behavioral disorder. The patient was accompanied by his sister, who revealed that he had already used psychiatric medication due to schizophrenia and had undergone a molding to make dental prostheses. No abnormalities were found on the extraoral examination or on the panoramic radiograph of the jaws. The patient was oriented to oral care (use of baking soda and mastic solution), as well as to avoid the habit of repetitive bite. After 15 days the lesion regressed by 50%, and within 45 days there was a total regression of the upper arch lesion (Figure 2) and 80% regression of the lower arch lesion (Figure 3). Confirming the clinical diagnosis: ulcerative traumatic injury. The patient is under follow-up at both BHU and HUOC / UPE. The patient and his sister agreed by signing the Informed Consent Form to disclose this case for academic purposes.

CASE REPORT 2 - EDSC, 66 years old, female, white, non-smoker, non-alcoholic, from Paulista - PE, diagnosed with invasive breast carcinoma (AP 9727-18) in the left breast. The proposed oncological medical treatment was neoadjuvant chemotherapy followed by radical mastectomy with left axillary dissection, followed by breast reconstruction and radiotherapy. Prior to the beginning of the antineoplastic treatment EDSC was sent to the Dentistry Service of the Oncology Center of the University Hospital Oswaldo Cruz of the University of Pernambuco - CEON / HUOC / UPE for adequacy of the oral environment. Anamnesis, extra and intraoral physical examination, and panoramic radiography of the jaws were performed. At the intra-oral clinical examination, a partially dentate patient was identified, using a partial upper dental prosthesis, unsatisfactory hygiene, with accumulation of biofilm and tongue of tongue, but without signs of periodontal disease. Presence of a dotted erythematous area located in a palatal area of the hard palate, with clinical features compatible with prosthetic stomatitis. It was also noted remarkable anxiety and depressed general state of it. The oral environment was adjusted and the Standard Oral Care Operational Protocol (POP - Oral) (VIDAL, AKL 2012) was instituted for individuals under chemotherapy antineoplastic therapy, and the use of a small head and soft bristled toothbrush, toothpaste was prescribed. non-abrasive (infantile), mouthwash with oral sodium bicarbonate solution (8 / 8h), mouthwash with 0.12% chlorhexidine digluconate (12 / 12h), mouthwash with nystatin oral solution 100,000 IU (6 / 6h) and application topical vitamin E (oily) 12 / 12h; associated with the application of Low Power Laser (LBP), MMO Laser Duo device (MMOptics - São Carlos, SP, Brazil, light emitting GaA1As, wavelength 660nm, power of 100mW, 2J energy and beam area 3 mm² , application twice a week. EDSC successfully completed antineoplastic treatment with good oral condition, but developed depression and bilateral intentional parafunctional habit of jugal mucosa, with right jugal mucosa ulcer. Maintenance of oral care, as well as to avoid the habit of repetitive intentional biting, which was also accompanied by psychiatry, where it was stipulated for treatment and control of anxiety the use of Sertraline Hydrochloride (20mg) daily. EDSC showed total remission of ulcer in the right jugal mucosa, as well as intact mucosa, confirming the clinical diagnosis of chronic nibbling, probably initiated by the anxious state the patient was in. EDSC follows outpatient clinical follow-up at HUOC / UPE. EDSC has agreed by signing the Informed Consent Form to disclose this case for academic purposes.

CASE REPORT 3 - LBS, female, 44 years old, white, housewife, from Jaboatão dos Guararapes / PE, sought the Dentistry service of the Oncology Center of Oswaldo Cruz University Hospital - HUOC referred by the Otorhinolaryngology complaining “non-healing injury since 2013” (sic). Presents history of consultation with psychiatry (2014) diagnosed
with anxiety disorder, where Fluoxetine 20mg was prescribed, but reports only having used the medication for 02 days because she felt bad. She was then referred to psychotherapy, but no longer attended the returns. In all dental consultations during the clinical evaluation, LBS is anxious and behaves by placing her hands in front of her mouth to prevent light from coming in. She says that she feels unwell, tachycardia, shortness of breath and body flushing anytimes any kind of light / radiation goes through your mouth. The anamnesis was performed and after much conversation LBS allowed the accomplishment of the extra and intraoral physical exam. At the intra-oral clinical examination, good dental, periodontal condition, intact mucosa and regular hygiene were identified, without any oral-dental alteration. LBS was then advised on the service's standard oral care protocol, and again referred to the psychiatry service. In return consultation the patient denies improvement of symptoms and remains with speech inconsistent with reality. Apparently LBS did not seek to return to psychiatry nor returned to the appointment of the Dentistry service. LBS has agreed by signing the Informed Consent Form to disclose this case for academic purposes.

In this new model of health care, which reaffirms the principle of comprehensiveness of the Unified Health System (UHS), it is appropriate to welcome and care people with mental illness in a way that preserves and strengthens the social and affective bonds of the user in their environment. experience. Bringing autonomy, co-responsibility and protagonism of the subject, as well as the active participation of their families. This new model requires the inclusion of family and user in decision-making regarding their health, so that there is better acceptance and participation in the proposed treatment (BORBA et al., 2011; BRAZIL, 2005) as can be evidenced in these case reports.

This transformation in mental health care provides the creation of a bond of trust between professionals, users and family members culminating in the segment of their treatment in a resolute and humanized way. Therefore, it becomes evident that for the mentally ill patient to have his treatment offered in full, with the participation of the family and the protagonism of the subjects involved, he will need the attention of a qualified multidisciplinary and interdisciplinary team, which in fact exercises a new form of care (CONSTANTINIDIS, 2017).

With the change in the form of care, the family came to have great responsibility over the subject, due to the replacement of the biomedical model asylum these patients are no longer kept hospitalized in asylums, so ends up having a burden for the family, which began to have greater contact with mental suffering. Consequently, health professionals should be ready not only to provide comprehensive patient care, but also to provide support to the family, keeping it structured to provide effective patient care. Given the above, we conclude that the triad patient / health professionals / family should assume a co-responsible stance to ensure full and humanized care for the health of people with mental disorders and that all care services should include family group approaches (JORGE et al., 2011; CONSTANTINIDIS, 2017).

FINAL CONSIDERATIONS

Patients with mental illness are entitled to the same standards of care as the rest of the population. Oral health has a significant impact on systemic health and, therefore, health professionals should be aware of the impact of mental illness and its treatment on oral health.

Guidelines that address the needs of this diverse group of patients should be non-discriminatory in practice and based on the principles of choice and fair access to oral health information and services, regardless of the individual's illness, financial constraints, or other personal constraints. Above all, practitioners should focus on the individual demands and needs of patients. Building a holistic reception and maintaining the patient's bond are integral practices in health care management that drive faster diagnosis and resolution of user needs.
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