

Oral Manifestations of Psychotropic Drugs on the Oral Cavity: Observational Study

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ABSTRACT

Aim: This study aims to detect the prevalence of oral manifestations in patients with psychiatric disorders on psychotropic medications.

Materials and methods: A total of 46 patients above the age of 18 years who have been diagnosed with psychiatric illness and under psychotropic medications were included in this study. Thorough case history and oral findings were recorded. Patients with already existing systemic illness and other oral manifestations were excluded from this study.

Results: Out of 46 patients, 34 patients presented with oral manifestations such as xerostomia, sialorrhea, geographic tongue, candidiasis, and burning mouth syndrome, secondary to the use of psychotropic medications. The oral manifestations were significantly higher in the patients under antipsychotics (80.0%), selective serotonin reuptake inhibitor (66.7%), antiepileptics (55.6%), antidepressants (44.4%), benzodiazepine (44.4%), and tricyclic antidepressants (13.7%).

Conclusion: The commonly used psychotropic medications to treat patients with psychiatric illnesses such as selective serotonin reuptake inhibitor, tricyclic antidepressants, antidepressants, and benzodiazepines exhibited several oral manifestations. However, long-term use of these medications seems to cause oral changes.

Clinical significance: Awareness among psychiatrists about oral changes associated with the use of psychotropic medication will assist them to make necessary modifications in the prescriptions. Dental practitioners will be able to recognize these changes early in the course of the condition and provide appropriate treatment.

Keywords: Oral manifestations, Psychiatric disorders, Psychotropic drugs.

The Journal of Contemporary Dental Practice (2022): 10.5005/jp-journals-10024-3327

INTRODUCTION

According to WHO report on mental health in 2017, it is estimated that one in every 10 individuals (10.7%), around 792 million people in the overall population, suffers from a diagnosable psychological illness, which can vary from mild depression, panic disorder, kleptomania to a more debilitating condition like psychosis and schizophrenia.¹ People with psychiatric disorders are unable to execute routine essential activities of everyday life owing to a psychological or personal condition.² Many of these individuals are managed with psychotropic drugs which have varied effects on the oral mucosa.³

According to a recent study, people with severe psychiatric disorders face about 3.4 times the probability of losing all their teeth as that of the normal population. These individuals have an increased risk of decay and periodontal disease as a consequence of bacterial infections. Also, barriers to dental care, alcohol, and substance abuse and inability to maintain oral hygiene are other contributing factors. As most of the patients with psychiatric disorders are under multiple psychotropic medications, identifying the effects of each class of drugs is essential in managing oral diseases in these patients. Poor oral hygiene in individuals with psychiatric disorders may be influenced by a variety of conditions. These include the use of drugs that may cause a reduction in salivary secretion, an improper diet, and the apathy of many psychiatric patients. Reduced salivary secretion is one of the most significant side effects of psychotropic medications that can lead to various oral diseases.⁴⁻⁶ A frequent side effect due to the use of antipsychotics and antidepressants drugs is xerostomia.⁷⁻¹² Xerostomia leads to enhanced demineralization, increased incidence of caries and loss of tooth.^{10,13} Similarly, patients admitted in hospitals suffering

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How to cite this article: Gandhi P, Saxena A, Pai K, *et al.* Oral Manifestations of Psychotropic Drugs on the Oral Cavity: Observational Study. *J Contemp Dent Pract* 2022;23(4):443-446.

Source of support: Nil

Conflict of interest: None

from long-term psychiatric disorders have an increased incidence of dental caries due to fewer dental consultations.^{10,14-17} In 1980, McCarthy and Shikar proposed a classification of oral psychosomatic diseases based on etiology which included certain oral mucosal lesions such as lichen planus, recurrent aphthous stomatitis, pemphigus, glossodynia, chronic periodontal diseases, and mechanical irritation.¹

Hence, this study was planned to evaluate the oral manifestations in patients who were on psychotropic medications alone. We did not consider oral manifestations in patients before initiating the psychotropic medication. This was confirmed by the treating psychiatrists who reported that these manifestations developed after initiating the medications. This we believe will help the dental physicians to plan necessary treatment in managing

these oral manifestations. Similarly, the attending psychiatrist will be able to identify these oral changes at an early stage and refer to oral physicians also, recognition of such oral manifestations is important in these patients as they may add up to the emotional, economical and functional burden. Hence, the present study was considered as usually such manifestations may go unnoticed and advance further.

MATERIALS AND METHODS

This study was conducted for a period of about 8 months from the year 2019 to 2020, in the outpatient clinics of Oral Medicine and Radiology, Mangaluru. Patients who were approved by the psychiatric professional, systemically fit, and not under any other medications are considered for the study. Patients who had other comorbid conditions and currently on medications for the same were excluded in spite of them been treated with psychotropic medications. A total of 46 patients who had a psychiatric illnesses were selected for the study. The youngest patient was 24-year-old and the oldest patient was 70-year-old. Patients with already existing systemic illness and its associated oral manifestations were excluded from this study.

Examination of the patient was performed after obtaining informed consent. A thorough case history was recorded especially with regard to the psychiatric illness, nature of psychotropic drugs, and duration of medications taken, also details with regard to multiple psychotropic drugs were recorded. Subjective symptoms such as dry mouth, burning sensation, loss of taste, excessive salivation, and bleeding from gums were asked. Following the patient interview, the oral cavity was examined in detail for changes in the quality and quantity of saliva, mucocutaneous changes, regressive alterations of teeth, and gingival alterations. The oral evaluation was done by a single investigator and a single psychiatrist evaluated all the participants for this study. After the oral examination of the patients, the oral soft tissue findings were recorded.

Data thus obtained was analyzed using SPSS Statistics (Version 17.0., Chicago: SPSS Inc.). The significance level was set at $p \leq 0.05$. Chi-square analyses determined the differences between those with oral manifestations due to psychotropic disorders and their medications.

RESULTS

A total of 46 patients above the age of 18 years were referred from Department of Psychiatry, for evaluation of oral health status. Of the 46 patients, 25 were female and 21 were male. In our study, the youngest patient was 24-years-old and the oldest patient was 70-years-old. The mean age of all the patients was 48.7 years. Of the 46 patients, 34 patients presented with oral manifestations secondary to the use of psychotropic drugs.

Of all the included patients, the psychiatric disorders were schizophrenia disorder (32.5%), depression (27.9%), bipolar disorder (11.6%) and panic disorder (11.6%), hypomaniac (9.3%) and psychosis, kleptomania, obsessive-compulsive disorder (OCD) of 2.3% each respectively as shown in Figure 1.

In our study, the oral manifestations observed in the patients under various psychotropic medications from the most common to least were xerostomia (21.7%), sialorrhoea (17.4%), geographic tongue (13.0%), periodontitis (10.9%), candidiasis (8.7%), and burning mouth syndrome (8.7%) as shown in Figure 2.

The most commonly prescribed psychotropic medications for the psychiatric patients were atypical antipsychotics (23.9%), antipsychotics (21.7%), antiepileptics (19.6%), antidepressants (19.6%), benzodiazepine (19.6%), anticonvulsants (15.2%), selective serotonin reuptake inhibitor (17.4%) and tricyclic antidepressants (8.7%) as shown in Figure 3.

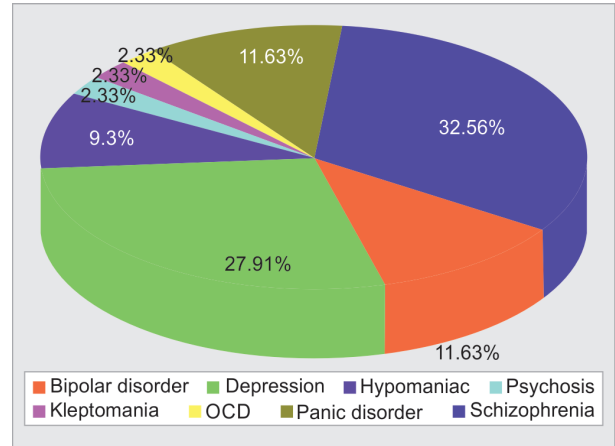


Fig. 1: Commonly diagnosed psychiatric disorders

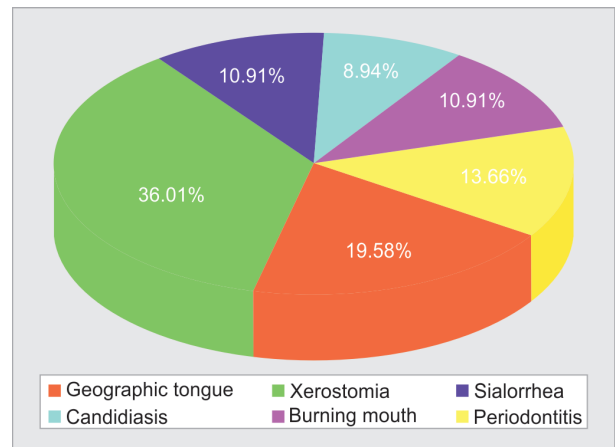


Fig. 2: Shows commonly presented oral manifestations secondary to use of psychiatric medications

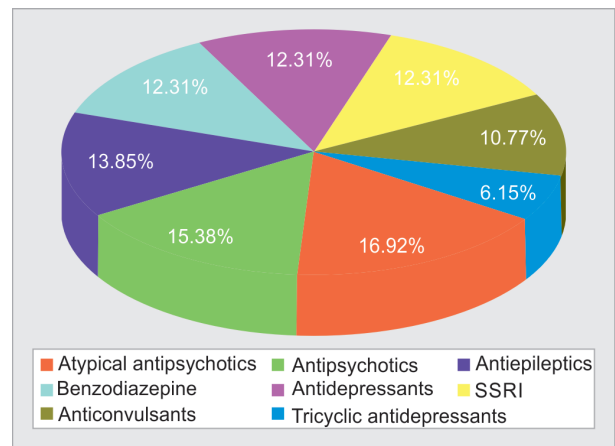


Fig. 3: Commonly prescribed psychotropic medications for the psychiatric illness



Xerostomia was seen among the patients who were under antipsychotics (80.0%), antidepressants (44.4%), benzodiazepine (1.1%), and SSRI (11.1%). The geographic tongue was the second most common oral manifestation seen in patients under SSRI (66.7%) and tricyclic antidepressants (13.7%). The other oral manifestations seen were periodontitis seen in patients using antiepileptics (55.6%), sialorrhea in patients taking benzodiazepine (44.4%), and burning mouth syndrome in patients under antidepressants (44.4%). Oral candidiasis was seen in patients using tricyclic atypical antipsychotics (36.4%). Among all the oral manifestations induced by the psychotropic drugs, the highest incidence was xerostomia with antipsychotics (66.7%), and the least incidence was oral candidiasis with tricyclic atypical antipsychotics (36.4%).

DISCUSSION

For those suffering from mental illnesses, oral health is crucial as it can disrupt interpersonal relationships and upsurge behavioral characteristics of the condition. Patients with psychological disorders are more vulnerable to oral diseases than the general population. Oral pathologies in such individuals are frequently attributed to inadequate oral hygiene as a consequence of their clinical condition, which marginalizes other possible causes. Patients with psychological conditions, on the other hand, routinely take psychotropic medications for extended periods.³

On the review of literature, it is reported that the widely prescribed psychotropic medications are known to cause oral manifestations which are summarized in Table 1.^{5,7,8,10-13,18-21}

The present study revealed the fact that presentation of oral manifestations seemed to increase with advancing age and these findings are consistent with the studies conducted by Raghavan et al. and Ghafoor et al.^{22,23} Patients who were on medications for a relatively a short duration of time (about 8 months to 4 years) did not have any oral manifestations. The early changes seem to be manifested as gingival enlargement. Patients who were on medications for a longer duration (over 7 years) seem to present with xerostomia. Age does not seem to be a factor in the presentation of these manifestations.

The present study was concluded that xerostomia was the commonest manifestation of all, which associated with the study conducted by Cockburn et al. on oral health impacts on psychotropic

medications.²⁴ The present study included a total of 46 patients, and schizophrenia was found to be the most common among all other psychological disorders. Similarly, Alhaffar et al. studied the oral manifestations of psychiatric disorders in 46 patients, and a majority of the patients were diagnosed with schizophrenia.¹⁰ Fratto and Manzon had compared the oral manifestations in patients under psychiatric medications and most of the psychotropic drugs were used for association similar to the present study. Also, they had mentioned that tricyclic antidepressants caused dry mouth and oral candidiasis and atypical antipsychotics caused dry mouth, sialorrhea, infections, and ulceration in the oral cavity, which had correlated with this current study.³

Despite the fact that many mental patients take various psychotropic medications, it is critical to understand their effects to manage the oral conditions in these patients. Most of these psychiatric drugs regrettably cause adverse reactions which can affect the oral environment and promote oral diseases. Henceforth, dental practitioners must be aware and informed of the potential oral health risks associated with these medications to treat psychiatric patients carefully. Oral health state should be considered by psychiatric specialists as part of their overall examination of patients. Oral hygiene and oral health care management should be a priority in counseling for psychiatric patients, including information on nutrition, smoking, and brushing techniques.

LIMITATIONS

The present study did not analyze the previous dental records of the study participants, also the current study had a small sample size, future studies with a large sample size should be evaluated for the oral changes due to psychiatric drugs.

CONCLUSION

The present study showed that the majority of the patients who were on psychotropic medications presented with an oral manifestation. The commonly used SSRI, antidepressants, and benzodiazepines exhibited oral changes. Xerostomia was the most common oral manifestation. Adequate knowledge and early diagnosis of these medications induced oral changes will result in a better quality of life of patients on psychotropic drugs.

Table 1: Oral manifestations of psychotropic drugs based on literature review

<i>Psychotropic drugs</i>	<i>Oral manifestations</i>
Typical antipsychotics	Bruxism, oromandibular dyskinesia, rabbit syndrome, tardive dyskinesia, dysphagia, tongue edema, dysgeusia, erythema multiforme, stomatitis, oral ulcers, Steven-Johnson syndrome, glossitis, gingival hypertrophy, gastroesophageal reflux, salivary gland enlargement, hypertrophic papilla of tongue, pemphigus, oral candidiasis, oropharyngeal pain, bruxism, and periodontal abscess.
Atypical antipsychotics	Rabbit syndrome, stomatitis, pharyngitis, glossitis, oral ulcers, dyskinesia
Selective serotonin reuptake inhibitors	Bruxism, lip pigmentation, oral lichenoid reactions
Antidepressant	Dysgeusia, stomatitis, dysphagia, bruxism, glossitis, tardive dyskinesia, hairy tongue, salivary gland enlargement, glossitis, gingivitis, halitosis, oral ulcers, periodontal disease, erythema multiforme, sinusitis, jaw stiffness, oral candidiasis, Steven-Johnson syndrome and gingival recession
Tricyclic antidepressants	Oral dryness, candidiasis, periodontal disease and dental caries ^{7,23}
Antiepileptics	Oral dryness, gingivitis, gingival enlargement, lichenoid reactions, glossitis
Benzodiazepine	None reported in the literature

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