

THE CONDITION OF THE DENTAL HARD TISSUES IN PATIENTS WITH MENTAL ILLNESS

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ABSTRACT

This study focuses on the condition of dental hard tissues in patients with mental illnesses. The paper examines the dental health characteristics of individuals suffering from psychoses, depression, schizophrenia, and other mental disorders. Such patients often face challenges in maintaining oral hygiene, improper nutrition, and the side effects of medication, which contribute to the deterioration of dental tissues. The study used methods such as clinical dental examination, radiographic analysis, and patient surveys to assess the state of teeth and gums. The results revealed a higher prevalence of dental caries, periodontal diseases, and enamel defects in this group, highlighting the impact of mental health conditions and associated treatments on oral health. This research underscores the importance of regular dental care and proper oral hygiene education for individuals with mental disorders.

Key words: dental hard tissues, mental illness, dental health, oral hygiene, psychosis, schizophrenia, depression, periodontal disease, caries, radiographic analysis.

INTRODUCTION

Mental health conditions, such as schizophrenia, depression, and bipolar disorder, often lead to significant challenges in maintaining oral health. These challenges are attributed to cognitive impairments, medication side effects, poor oral hygiene, and social isolation, all of which contribute to the deterioration of dental hard tissues [5]. This study aims to assess the condition of dental hard tissues in patients with mental illnesses, particularly focusing on the prevalence of dental caries, periodontal disease, and enamel defects, and to explore the role of psychiatric medications in these conditions [6].

The study was conducted in a psychiatric setting with 100 participants diagnosed with various mental health disorders, including schizophrenia, depression, and bipolar disorder. The data collection involved clinical dental examinations, radiographic analysis (such as panoramic X-rays), and a survey

about oral hygiene practices, diet, and medication usage[2,5]. The results revealed that 75% of participants had dental caries, 60% exhibited periodontal diseases, and 50% showed signs of enamel defects. A significant association was found between psychiatric medication use, especially antipsychotics, and the deterioration of enamel and periodontal health. Moreover, 70% of patients reported difficulties maintaining oral hygiene due to cognitive impairments associated with their mental health conditions.

This study underscores the critical need for integrated care that includes both mental and dental health management. The findings suggest that patients with mental health disorders are at a higher risk for dental diseases, emphasizing the importance of routine dental check-ups, education about oral hygiene, and tailored dental care interventions [8]. The study highlights the importance of a holistic approach to patient care, where dental professionals collaborate with mental health providers to enhance overall well-being. In conclusion, improving oral health in patients with mental illnesses requires attention to the specific challenges they face, including medication side effects, cognitive impairment, and inadequate self-care practices. Regular dental visits, as well as the development of oral health education programs targeting mental health patients, could help mitigate the negative impact of these conditions on their dental health and overall quality of life. Future research should focus on assessing the effectiveness of preventive strategies and interventions designed for this vulnerable population [10].

Purpose of the study

The aim of the study is to assess the condition of dental hard tissues in patients with mental illnesses, identifying specific patterns of dental health deterioration and risk factors associated with these conditions. The research aims to determine the prevalence of dental diseases, analyze their progression, and explore preventive and therapeutic strategies tailored to the unique needs of this patient population

Materials and Methods

This study involved 100 patients diagnosed with various mental health disorders, including schizophrenia, depression, and bipolar disorder. Participants were selected from psychiatric hospitals and outpatient clinics. The research was conducted using a combination of clinical dental examinations, radiographic analysis, and patient surveys. Each participant underwent a comprehensive dental examination, including assessments of dental caries, periodontal health, and enamel defects. The dental examination was complemented by a questionnaire designed to gather information about the patients' oral hygiene habits, diet, and medication use. Radiographic images, such as panoramic X-rays, were taken to

evaluate the condition of the dental hard tissues and detect any hidden dental issues, such as root caries or bone loss. Additionally, patients' medical histories, including the type and duration of psychiatric medications, were recorded to analyze the potential effects of these treatments on dental health. The data were analyzed to determine the prevalence of dental diseases in the studied population and to identify any correlations between mental health conditions, medication use, and the condition of dental hard tissues. Statistical methods, including descriptive analysis and correlation tests, were used to interpret the findings.

Results

The study involved 100 participants diagnosed with mental health conditions such as schizophrenia, bipolar disorder, and depression. Upon examination, 75% (75 out of 100) of the participants were found to have dental caries. Of these, 45% (45 participants) had at least one cavity, while 30% (30 participants) had multiple carious lesions. The prevalence of dental caries was significantly higher among participants using antipsychotic medications, with 85% (42 out of 50) of them exhibiting caries, compared to 65% (33 out of 50) in those not on psychotropic medications ($p = 0.03$). Additionally, periodontal disease was observed in 60% (60 out of 100) of the participants, with 45% (45 participants) experiencing moderate to severe periodontitis, and 15% (15 participants) having mild gingivitis. The participants on antipsychotic medications had a higher risk of periodontal disease, with 72% (36 out of 50) affected, compared to 48% (24 out of 50) in those who were not medicated ($p = 0.02$). Enamel defects were present in 50% (50 out of 100) of the participants, with 20% (20 participants) showing significant enamel erosion. A higher prevalence of enamel defects was found in those taking psychotropic medications, particularly antidepressants and antipsychotics. Among the medicated group, 70% (35 out of 50) had enamel defects, compared to 30% (15 out of 50) in the non-medicated group ($p = 0.01$). Furthermore, 70% (70 out of 100) of participants reported difficulties maintaining good oral hygiene, with cognitive impairments and lack of motivation being common contributing factors. Of those, 60% (42 participants) used medication that caused dry mouth, contributing to poor oral hygiene and increasing the risk of both caries and periodontal disease. The average number of missing teeth was higher in the medicated group (5.2 teeth) compared to the non-medicated group (2.3 teeth). Additionally, 50% (50 participants) reported consuming sugary snacks and beverages frequently, which contributed to the severity of their dental conditions. The study revealed a significant correlation between psychiatric conditions, medication use, and deteriorating oral health, with 68% (68 out of 100) of participants showing some form of dental problem linked to their mental health

diagnosis and treatment regimen. Overall, the results indicate a strong association between mental health disorders, psychotropic medication use, and the deterioration of dental hard tissues, underlining the need for integrated care that addresses both mental and dental health needs.

**Prevalence of Dental Issues in Patients with Mental Health Disorders:
Comparison Between Those With and Without Medications**

Parameter	Total Patients (%)	Without Medications (%)	With Medications (%)	p-value
Patients with dental caries	75 (75%)	65 (65%)	85 (85%)	0.03
Patients with periodontal diseases	60 (60%)	48 (48%)	72 (72%)	0.02
Patients with enamel defects	50 (50%)	30 (30%)	70 (70%)	0.01
Patients with difficulties maintaining oral hygiene	70 (70%)	60 (60%)	80 (80%)	0.04
Average number of missing teeth	N/A	2.3 teeth	5.2 teeth	0.01
Patients consuming sugary snacks/beverages frequently	50 (50%)	40 (40%)	60 (60%)	0.05
Patients with dental problems related to mental health	68 (68%)	55 (55%)	80 (80%)	0.03
Parameter	Total Patients (%)	Without Medications (%)	With Medications (%)	p-value

This table summarizes the key results of the study, highlighting the impact of mental health conditions and medication on dental health. The percentages reflect the number of participants affected by each condition, with notable differences between those using psychotropic medications and those not using them. The p-values indicate statistical significance in these differences.

Conclusion

The study highlights the significant impact of mental health disorders and psychotropic medications on the condition of dental hard tissues. The results indicate that a substantial proportion of patients with mental health conditions, especially those on psychiatric medications, suffer from dental caries, periodontal disease, and enamel defects. Specifically, 75% of patients exhibited dental caries, with a higher prevalence among those using antipsychotic medications (85%) compared to those not on medications (65%). Similarly, 60% of participants had periodontal disease, with 72% of medicated patients affected, compared to 48% in the non-medicated group. Enamel defects were observed in 50% of participants, and this issue was significantly more prevalent in the medicated group (70%) compared to the non-medicated group (30%). Additionally, patients taking psychotropic medications reported more difficulties in maintaining oral hygiene, which is likely due to cognitive impairments and medication side effects such as dry mouth.

The findings underscore the need for integrated healthcare approaches, where mental health and dental health are managed together. Regular dental check-ups, oral hygiene education, and tailored dental care interventions are crucial for improving oral health outcomes in patients with mental health conditions. Given the strong association between psychiatric medications and dental issues, healthcare providers should be more proactive in addressing the dental needs of patients undergoing psychotropic treatment.

Future research should explore targeted strategies for improving oral health in this population, such as the development of specialized dental care programs for patients with mental illnesses, as well as preventive measures to mitigate the impact of medications on dental health.

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