

Oral Rehabilitation in a Medically and Psychologically Compromised Patient: A Case Report**Neeraj Trehan¹, Juhi², Yukti Amol Naukarkar³, Gayatri Dipak Gujar⁴, Paridhi Sharma⁵, Sunaira Noel Daniel⁶**¹Doctor of Dental Medicine (DMD), USA; Private Practitioner, USA^{2,3,4}Bachelor of Dental Surgery, India; Research Assistant, USA⁵Bachelor of Dental Surgery, Nepal; Research Assistant, USA⁶Bachelor of Dental Surgery, Pakistan; Research Assistant, USA

Received: 01-04-2026 / Revised: 15-05-2026 / Accepted: 21-06-2026

Corresponding author: Dr. Neeraj Trehan

Conflict of interest: Nil

Abstract

Oral rehabilitation in medically and psychologically compromised patients presents considerable clinical challenges due to the influence of systemic diseases, psychological disorders, and associated pharmacological therapies on treatment planning and prognosis. This case report describes the comprehensive oral rehabilitation of a 26-year-old Caucasian female with a history of anemia requiring blood transfusions, depression managed with antidepressant therapy, and ongoing Suboxone treatment. Clinical examination revealed generalized severe dental caries, retained root fragments, missing teeth, compromised periodontal health, and occlusal instability, resulting in impaired function and esthetics. A comprehensive diagnostic evaluation, including clinical examination, radiographic assessment, periodontal charting, and occlusal analysis, was performed to formulate an individualized multidisciplinary treatment plan. The proposed rehabilitation involved extraction of non-restorable teeth, preservation of strategically important teeth, implant-supported prosthetic rehabilitation, and restoration of occlusal harmony. Careful consideration of the patient's medical and psychological status enabled safe treatment planning and successful rehabilitation. The final outcome demonstrated marked improvement in oral function, esthetics, and occlusal stability, highlighting the importance of a holistic, patient-centered approach in managing complex dental cases. This case emphasizes that meticulous diagnosis, interdisciplinary collaboration, and individualized treatment planning are essential for achieving predictable functional and esthetic outcomes in medically and psychologically compromised patients.

Keywords: Oral Rehabilitation; Medically Compromised Patient; Depression; Dental Implants; Prosthodontic Rehabilitation; Multidisciplinary Approach.

DOI: 10.25258/ijcpr.18.7.28

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

The successful oral rehabilitation of medically and psychologically compromised patients presents a significant challenge in contemporary dental practice. Such patients often exhibit complex systemic conditions, psychological distress, reduced treatment tolerance, and impaired oral health, all of which necessitate a comprehensive, patient-centered, and multidisciplinary approach to treatment planning. A thorough understanding of the patient's medical history, psychological status, and functional requirements is essential to ensure safe and predictable prosthodontic outcomes while minimizing the risk of complications. [1]

Medical comorbidities such as cardiovascular diseases, diabetes mellitus, hypertension, endocrine disorders, and immunocompromised states can

significantly influence dental treatment planning, wound healing, infection control, and the selection of appropriate prosthetic materials and treatment modalities. Comprehensive preoperative assessment, effective communication with the patient's physician when necessary, and appropriate modifications in clinical procedures are fundamental to achieving successful rehabilitation in these individuals. [1,9,10]

Psychological factors also play a crucial role in determining the success of oral rehabilitation. Anxiety, depression, dental fear, emotional stress, and unrealistic treatment expectations may adversely affect patient cooperation, treatment acceptance, and long-term maintenance of oral prostheses. Therefore, clinicians must establish

effective communication, provide psychological reassurance, and adopt individualized treatment strategies to improve patient compliance and overall satisfaction. [8] Oral rehabilitation aims not only to restore missing teeth but also to re-establish mastication, phonetics, facial esthetics, and oral health-related quality of life. Advances in prosthodontic techniques and restorative materials have expanded the treatment options available for medically compromised individuals, allowing clinicians to provide functional and esthetic rehabilitation with greater predictability. Nevertheless, treatment decisions must always balance patient expectations with medical safety and long-term prognosis. [2-7] Several studies have demonstrated that successful prosthodontic rehabilitation significantly enhances oral function, self-confidence, social interaction, and overall quality of life, particularly in patients with compromised systemic health. Individualized treatment planning, meticulous execution, and regular follow-up remain the cornerstones for achieving favorable clinical outcomes while maintaining patient comfort and safety. [6,7]

The present case report describes the comprehensive oral rehabilitation of a medically and psychologically compromised patient through a carefully planned multidisciplinary approach. The report highlights the clinical considerations, treatment challenges, and successful functional and esthetic outcomes achieved while emphasizing the importance of holistic patient management in complex prosthodontic rehabilitation. [8-10]

Case Report

Managing patients with complex medical and psychological conditions requiring comprehensive oral rehabilitation demands meticulous diagnosis, interdisciplinary planning, and individualized

treatment. Systemic diseases, ongoing pharmacological therapy, and psychological disorders may significantly influence treatment sequencing, patient compliance, healing, and long-term prognosis. Therefore, successful rehabilitation requires careful evaluation of the patient's medical status, oral condition, functional requirements, and esthetic expectations before formulating a definitive treatment plan. The present case illustrates the comprehensive assessment and rehabilitation planning of a young female patient presenting with severe dental deterioration in the presence of significant medical and psychological comorbidities.

Case Presentation

A 26-year-old Caucasian female presented to the dental clinic seeking comprehensive oral rehabilitation because of deteriorating dentition, compromised esthetics, and difficulty in maintaining normal oral function. The patient's medical history was significant for anemia requiring ongoing blood transfusions and a documented history of depression. She was receiving Celexa (20 mg once daily) and Clonidine (0.1 mg three times daily) as part of her medical management. In addition, the patient was enrolled in a Suboxone clinic and was taking Suboxone 8 mg tablets twice daily. Considering the patient's complex systemic and psychological status, a comprehensive medical evaluation and treatment planning were undertaken before initiating definitive dental rehabilitation.

Extraoral examination revealed an acceptable facial profile with no obvious facial asymmetry or significant temporomandibular joint abnormalities. However, the patient's smile was compromised by the poor condition of the anterior dentition, resulting in esthetic concerns. (Figure 1)



Figure 1: Preoperative extraoral photographs showing frontal and lateral facial views.

Intraoral examination demonstrated generalized poor oral health characterized by multiple grossly decayed teeth, retained root fragments, extensive coronal destruction, missing teeth, and defective restorations, generalized plaque accumulation, and compromised periodontal support. Several

maxillary anterior teeth exhibited advanced structural loss, while posterior teeth showed extensive carious involvement. Occlusal discrepancies and loss of posterior support were evident, contributing to functional impairment and compromised mastication. (Figure 2)



Figure 2: Preoperative intraoral photographs demonstrating extensive dental caries, missing teeth, retained root fragments, and generalized deterioration of the dentition.

Diagnostic casts were prepared for comprehensive occlusal analysis. Static occlusal evaluation demonstrated an unstable intercuspal relationship with loss of harmonious occlusion. Dynamic occlusal assessment, including right lateral, left lateral, non-working, and protrusive movements, revealed disturbed occlusal contacts that required correction during definitive rehabilitation. (Figure 3 and 4)



Figure 3: Diagnostic casts showing preoperative static occlusal relationship.



Figure 4: Dynamic occlusal evaluation showing right working, left working, non-working, and protrusive mandibular movements.

A complete radiographic examination and periodontal charting were performed to determine the prognosis of the remaining dentition. Radiographs confirmed multiple carious lesions, retained roots, and teeth with questionable

restorability. Periodontal assessment identified varying degrees of periodontal involvement, with several teeth exhibiting poor prognosis and requiring extraction as part of the comprehensive treatment plan. (Figure 5)



Figure 5: Preoperative radiographic examination and periodontal charting used for comprehensive treatment planning.

Following detailed clinical and radiographic evaluation, an ideal multidisciplinary treatment plan was formulated. The proposed rehabilitation included extraction of non-restorable teeth, preservation of strategically important teeth, implant placement in selected maxillary regions,

restoration of remaining teeth, and full-mouth prosthodontic rehabilitation to re-establish function, esthetics, and occlusal harmony. Diagnostic wax-up was completed to visualize the anticipated outcome and facilitate treatment planning. (Figure 6 and 7)

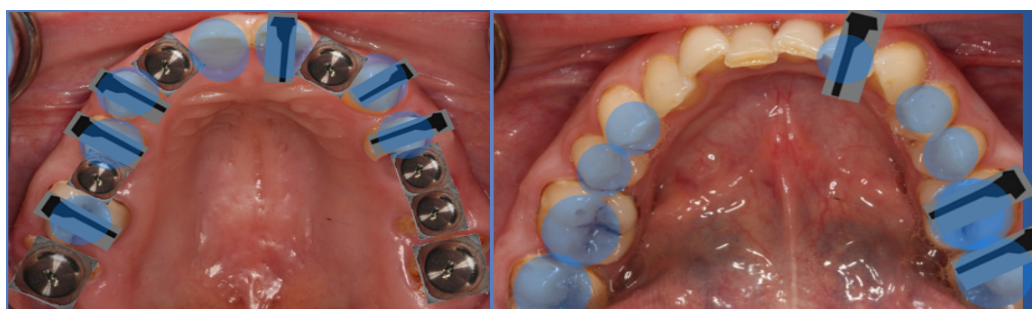


Figure 6: Proposed implant-supported prosthetic rehabilitation plan for the maxillary and mandibular arches.

Post-treatment records demonstrated significant improvement in esthetics, occlusal stability, and overall dental rehabilitation, with restoration of an acceptable functional occlusion and harmonious smile.



Figure 7: Postoperative prosthetic rehabilitation demonstrating restoration of esthetics, occlusal harmony, and functional rehabilitation.

Discussion

Oral rehabilitation of medically and psychologically compromised patients remains one of the most demanding aspects of prosthodontic practice because successful treatment depends not only on restoring oral function but also on careful management of the patient's systemic health, psychological status, and treatment expectations. In the present case, the coexistence of anemia requiring blood transfusions, depression, and Suboxone therapy significantly influenced treatment planning, necessitating a cautious, multidisciplinary, and patient-centered approach. Careful assessment of the patient's medical history, medications, and oral condition was essential before initiating definitive rehabilitation. [11]

Patients with chronic systemic diseases often exhibit delayed healing, increased susceptibility to infection, and altered responses to dental procedures. Likewise, psychological disorders may reduce patient motivation, compromise oral hygiene practices, and negatively influence compliance with lengthy treatment protocols. Therefore, clinicians must establish effective communication, provide psychological reassurance, and tailor treatment according to the patient's overall health status. Such individualized management improves treatment acceptance and contributes to more predictable clinical outcomes. [11,15]

The extensive carious destruction, retained root fragments, missing teeth, and occlusal instability observed in the present case required comprehensive diagnostic evaluation before definitive rehabilitation. Diagnostic casts,

radiographic assessment, and periodontal evaluation enabled accurate identification of teeth with favorable prognosis and those requiring extraction. Comprehensive treatment planning is considered indispensable for achieving long-term functional stability and esthetic success in patients with severely compromised dentition. [12,13]

Implant-supported prosthetic rehabilitation has become an established treatment modality for restoring oral function and esthetics in patients with multiple missing or non-restorable teeth. However, successful implant therapy depends on careful case selection, meticulous surgical and prosthetic planning, adequate periodontal health, and patient compliance with maintenance protocols. In medically compromised individuals, these considerations become even more critical to ensure favorable healing and long-term implant survival. [13]

In the present case, a multidisciplinary rehabilitation strategy combining extraction of hopeless teeth, preservation of strategically important teeth, implant-supported restorations, and comprehensive prosthodontic rehabilitation successfully restored occlusal harmony, masticatory efficiency, and facial esthetics. The final outcome demonstrated that even patients with significant medical and psychological challenges can achieve satisfactory functional and esthetic rehabilitation when treatment is carefully planned and executed with close interdisciplinary collaboration. [14,15]

Overall, this case emphasizes that successful oral rehabilitation extends beyond replacing missing teeth. A holistic approach that integrates medical

evaluation, psychological support, comprehensive diagnosis, meticulous treatment planning, and long-term maintenance is essential for achieving predictable clinical outcomes and improving the patient's oral health-related quality of life. [11-15]

Conclusion

Comprehensive oral rehabilitation in medically and psychologically compromised patients requires meticulous diagnosis, individualized treatment planning, and close interdisciplinary collaboration.

This case demonstrates that successful functional and esthetic rehabilitation can be achieved despite significant systemic and psychological challenges through careful medical evaluation, appropriate sequencing of treatment, and prosthodontic planning. A holistic, patient-centered approach not only restores oral function and esthetics but also enhances patient confidence, comfort, and overall quality of life. Long-term maintenance and regular follow-up remain essential to ensure the longevity and success of the rehabilitation.

References

1. Little JW, Miller CS, Rhodus NL. Dental Management of the Medically Compromised Patient. 9th ed. St. Louis: Elsevier; 2018.
2. Bansal R, Jain A, Mittal S, Kumar T. Full mouth rehabilitation in a medically compromised patient: A case report. J Int Oral Health. 2014;6(4):128-132.
3. Misch CE. Dental Implant Prosthetics. 2nd ed. St. Louis: Elsevier Mosby; 2015.
4. Zarb GA, Hobkirk JA, Eckert SE, Jacob RF. Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prostheses. 13th ed. St. Louis: Elsevier; 2013.
5. Phoenix RD, Cagna DR, DeFreest CF. Stewart's Clinical Removable Partial Prosthodontics. 4th ed. Hanover Park: Quintessence Publishing; 2008.
6. Carlsson GE, Omar R. The future of complete dentures in oral rehabilitation. J Oral Rehabil. 2010;37(2):143-156.
7. Montero J, Castillo-Oyagüe R, Lynch CD, Albaladejo A, Castaño A. Self-perceived changes in oral health-related quality of life after prosthodontic treatment. J Dent. 2013;41(11):1046-1052.
8. Petersen PE, Kwan S. Equity, social determinants and public health programmes: The case of oral health. Community Dent Oral Epidemiol. 2011;39(6):481-487.
9. Wilson W, Taubert KA, Gewitz M, Lockhart PB, Baddour LM, Levison ME. Prevention of infective endocarditis: Guidelines from the American Heart Association. Circulation. 2007;116(15):1736-1754.
10. Raja J, Gopinath M, Puttaiah R. Medical evaluation for dental treatment. J Conserv Dent. 2010;13(3):129-136.
11. Alqahtani H. Medically compromised patients in orthodontic practice: Review of evidence and recommendations. Int Orthod. 2019;17(4):776-788.
12. Ahmed T. A preservative approach for oral rehabilitation: A case report. Ann Med Health Sci Res. 2021;11:1187-1191.
13. Volpato MCP, Costa GM, Lara LDS, Volpato LER. Maxillofacial and oral rehabilitation of an oncologic patient: Case report. Int J Prosthodont Restor Dent. 2022;12(3):155-157.
14. Little JW, Falace DA, Miller CS, Rhodus NL. Little and Falace's Dental Management of the Medically Compromised Patient. 8th ed. St. Louis: Elsevier; 2013.
15. Scully C. Scully's Medical Problems in Dentistry. 7th ed. Edinburgh: Elsevier; 2014.