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Impact of Artificial Intelligence on Prosthodontic Rehabilitation: A Narrative Review

¹*Dr. Shefali Singla,* ²*Dr. Manu Rathee,* ³*Dr. Amit Tamrakar,* ⁴*Dr. M Stalin,*
⁵*Dr. Sarthak Singh Tomar,* ⁶*Dr. Nang Nalika Mounghkhom*

¹Professor and Head, Department of Prosthodontics, Dr Harvansh Singh Judge Institute of Dental Sciences & Hospital, Panjab University, Chandigarh.

²Senior Professor and Head, Department of Prosthodontics, Post Graduate Institute of Dental Sciences, Pt. B.D. Sharma University of Health Sciences, Rohtak, Haryana, India.

³Professor, Department of Prosthodontics, Faculty of Dentistry, Jamia Millia Islamia, New Delhi.

⁴Post Graduate Student, Department of Prosthodontics, Post Graduate Institute of Dental Sciences, Rohtak, Haryana, India.

⁵Post Graduate Student, Department of Prosthodontics, Post Graduate Institute of Dental Sciences, Rohtak, Haryana, India.

⁶Post Graduate Student, Department of Prosthodontics, Post Graduate Institute of Dental Sciences, Pt. B.D Sharma University of Health Sciences, Rohtak, Haryana, India.

Corresponding Author:

Dr. Manu Rathee, Senior Professor and Head, Department of Prosthodontics, Post Graduate Institute of Dental Sciences, Pt. B.D. Sharma University of Health Sciences, Rohtak, Haryana, India

Correspondence Email ID: serviceheb@gmail.com

Abstract

Artificial intelligence (AI) is revolutionising prosthetics dentistry by bringing new methods that improve treatment planning accuracy, expedite workflows, and improve patient results. This article looks at the various ways AI is used in prosthodontics, particularly in implant planning, prosthesis design, and diagnostics. Reliable data analysis from patient histories and medical imaging is made possible by AI-driven technologies, which support the creation of accurate treatment plans, specialised prosthetic solutions, and ideal material selection. Advanced AI helps with precision-guided surgical procedures, and machine learning algorithms greatly improve the prediction accuracy of treatment results. Additionally, AI has allowed patients to try prostheses virtually and customise their modifications, improving patient satisfaction by minimising chairside time. The clinical efficacy, ethical ramifications, and necessary training for dental professionals must all be considered as AI technology integration grows. In addition to emphasising AI's critical role in developing prosthetic rehabilitation techniques and influencing the direction of digital dentistry, the article highlights the substantial impact of AI on prosthodontic processes.

Keywords

Artificial intelligence, Digital dentistry, Prosthetic optimization.

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