Reg. No: RJ17D0105798 ISSN NO: 2582-0362

HEB JOPD

Journal of Prosthodontics Dentistry
An Official Publication of Bureau for Health & Education Status Upliftment
(Constitutionally Entitled as Health-Education, Bureau)

Impact of Artificial Intelligence on Prosthodontic Rehabilitation: A Narrative Review

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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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Website:http://heb-nic.in/jopd	
Received on 21/11/2024	
Accepted on 29/11/2024 © HEB All rights reserved	