EDITORIAL

AN UPDATE ON CONTEMPORARY IMPLANT DENTISTRY FOR GENERAL DENTAL PRACTICE

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I take great pleasure in welcoming you to part 2 of this Implant dentistry themed issue of the Primary Dental Journal. In recent years, digital technology has emerged as a transformative tool in implant dentistry, profoundly enhancing accuracy and effectiveness across multiple facets, including diagnosis, preoperative treatment planning, surgical procedures, and restoration delivery. The prudent incorporation of digital technology in implant dentistry represents a paradigm shift in dental care, leveraging advanced technologies to revolutionise workflows and patient outcomes. This rapidly evolving field encompasses a vast array of tools and techniques, fundamentally changing the way we as dental professionals approach our implant practice.

I have found it fascinating to witness recent developments in virtual planning software, enabling comprehensive three-dimensional (3D) visualisation of the hard and soft tissue and the position of the future implant restoration, resulting in enhanced diagnostic precision and predictability. These innovations allow dental professionals to further advance their ability to provide partially dentate and edentulous patients with a greater variety of simple to complex advanced treatment options involving dental implants.

Notwithstanding the benefits of the transformation of implant dentistry by digital technologies, these rapid technological advancements are introducing dental professionals to novel challenges, particularly with the widespread integration of artificial intelligence (AI) technology for diagnostic and prognostic purposes.[1] Therefore, it is important for dental professionals to have a sound clinical understanding of digital progression in

GUEST EDITORIAL

IMPLANT DENTISTRY – PART 2

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It is with great pleasure that I serve as the guest editor of this special Implant Dentistry themed issue of the Primary Dental Journal. This issue delves into a variety of techniques and strategies to provide the latest and most relevant information to dental professionals. As we continue to advance in the field of implant dentistry, clinicians face an ongoing challenge to adopt and incorporate modern tools and materials that elevate the quality of patient care while simultaneously reducing the complexity of their workflows. Our goal with this issue is to enrich the knowledge base of both new and experienced practitioners, empowering them to achieve optimal patient outcomes.

The articles featured in this issue span a diverse range of digital and analogue workflows, addressing cases from simple implant restorations to complex full-arch rehabilitations using various methodologies. A core theme emphasised throughout is the importance of meticulous treatment planning, supported by advanced imaging

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implant dentistry, enabling virtual surgery design and digital techniques for impressions, shade matching, and restoration fabrication; thus, facilitating seamless digital data conversion and efficient communication among clinicians and technicians and enhancing both clinical outcomes and patient experience.

This part 2 themed issue on implant dentistry provides a wealth of interesting and useful articles on diagnostic and restorative aspects of implant dentistry and sets the scene for new and experienced dental professionals wishing to further develop their practice of digital planning and workflows in implant dentistry. The articles in this issue cover an array of digital workflows ranging from considerations and strategies for single tooth implant restorations in the aesthetic zone to full-mouth rehabilitation with implant-supported fixed dental prostheses using computer-aided design–computer-aided manufacturing (CAD-CAM) frameworks.

Inevitably, as more dentists and patients choose the implant option to replace missing teeth, more patients with existing dental implants – along with their complications – are likely to be encountered in dental practice presenting for maintenance. It is therefore essential for dental practitioners and the wider dental team to have appropriate training and a sound clinical understanding of dental implants, their complications and management. The systematic review article on the current status and management of peri-implantitis in this issue provides invaluable evidence-based information on how to manage this increasingly encountered complication in dental practice.

We are fortunate that the two implant dentistry themed issues of the Primary Dental Journal bring together so many outstanding articles in a cohesive presentation of the latest clinical and scientific understanding that we have of implant dentistry. I am deeply grateful to the Guest editors of part 1 (Dr Amin Aminian) and part 2 (Professor Ilser Turkyilmaz) of the implant dentistry issues, and to the many other contributing authors for their essential input in this two-part implant dentistry themed publication of the Primary Dental Journal.

As outlined in part 1, implant dentistry is truly "an evolving discipline" as seen by the remarkable advances since the early work of Professor Brånemark, Professor Schroeder, and many others.[2] My hope is that these two implant dentistry issues will be a valuable asset to all dental professionals in their clinical dental implant practice.

REFERENCES

1 Shan T, Tay FR, Gu L. Application of Artificial Intelligence in Dentistry. J Dent Res. 2021;100(3):232-244.
2 Blum IR. Implant Dentistry: A journey from the beginnings to what has become an established discipline. Prim Dent J. 2024;13(3):2-3.

techniques such as cone beam computed tomography (CBCT). Such planning is vital in ensuring accuracy and predictability in implant placement. Alongside the focus on best practices, this issue also highlights potential complications arising from inadequate training or experience, as well as aesthetic challenges that often accompany implant procedures.

In recent years, the adoption of digital technologies has transformed the landscape of dental practice. Digital intraoral scanners, computer-aided design and computer-aided manufacturing (CAD-CAM) software, milling machines, and 3D printers have become increasingly prevalent in clinical settings. These technologies not only enhance precision and efficiency but also contribute to reducing disease transmission, minimising laboratory turnaround times, and decreasing chair time for patients. As a result, the dental office is evolving into a safer, more effective environment for delivering care.

I am deeply appreciative of the efforts made by all contributing authors to make this issue both comprehensive and insightful. I hope that each article encourages readers to consider integrating new digital solutions into their practices, enhancing both clinical outcomes and the patient experience. Nevertheless, it is crucial to stress that successful integration of new technologies requires proper training and adequate experience. I believe that the Primary Dental Journal and the College of General Dentistry play a pivotal role in supporting colleagues who wish to expand their proficiency in implant therapy and other aspects of contemporary dental practice.

Through this issue, we aim to empower clinicians to embrace innovation and deliver the highest standards of patient care in the dynamic field of implant dentistry.

Dear readers, I am frequently asked "When is the best time to begin practicing implant dentistry?" My response is always "Today, if not sooner."