



## Correspondence

# Full mouth reconstruction with immediate implant placement in multiple extraction sockets

**KEYWORDS**

Dental implant;  
Immediate placement;  
Full mouth  
reconstruction

The placement of endosseous dental implants has been a major and popular choice of treatment for restoring missing teeth since it was first successfully performed, using a titanium implant by Dr. Branemark in 1965.<sup>1</sup> Immediate implantation, by definition, refers to the placement of a dental implant in a fresh extraction socket, in contrast to delayed implant placement, in which the placement of a dental implant is performed after 4–6 months of new bone formation.<sup>2</sup> Immediate implant placement is now a reliable treatment method with a 93.3% survival rate at 1 and 5 years following loading, reported by Becker et al.<sup>3</sup>

Here, we reported a case of a 56-year-old male with multiple missing teeth and residual roots. The patient visited the oral and maxillofacial surgery division of the Tri-Service General Hospital, Taipei, Taiwan in 2016 presenting with difficulties in ingestion and speech, and esthetic deficit in appearance, due to a long period of poor oral hygiene care. After physical and radiographic examination, multiple missing teeth (14, 24, 26, 27, 35, 36, 45, 46, 47) and residual roots (11, 15, 18, 22, 37, 44, 48) were revealed in the upper and lower dentition with a loss of vertical dimension (Fig. 1A–E). There was no specific systemic, personal, or family history for this patient. He did not have a previous history of alcohol, betel quid, or cigarette consumption. After a comprehensive examination and discussion with the patient, he decided to undergo dental extraction of multiple residual roots followed

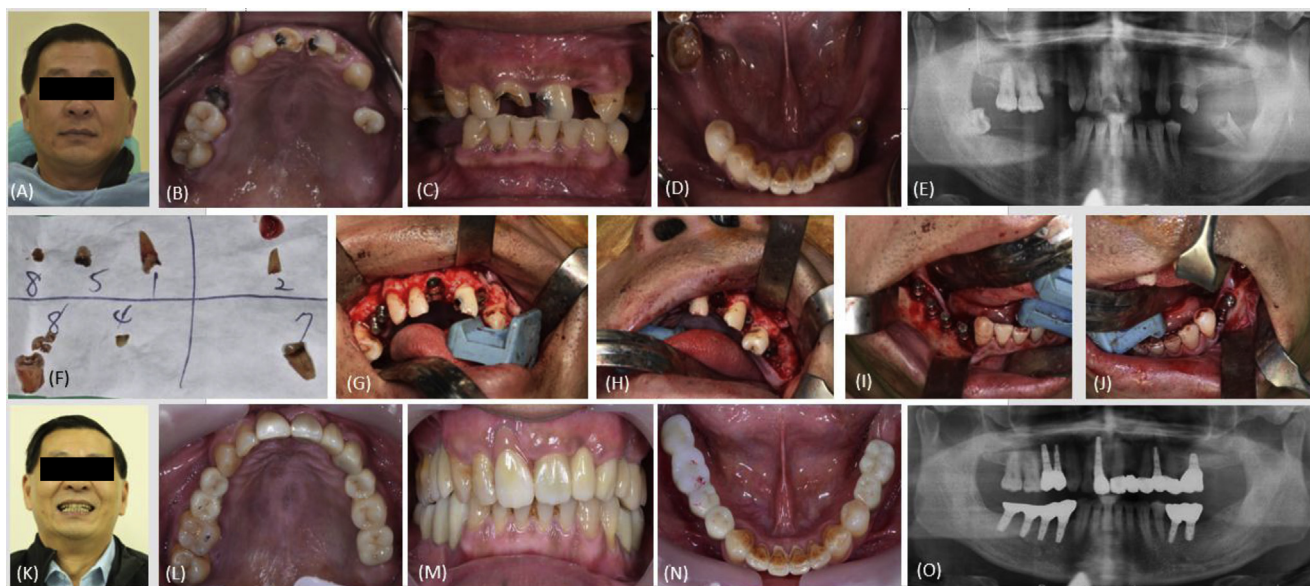
by immediate placement of dental implants under general anesthesia.

Atraumatic dental extraction was performed using periostomes (Helmut ZEPF, Seitingen-Oberflacht, Germany), which dramatically decreased the damage to the gingiva and alveolar bone, therefore increasing the initial stability and the success rate of osseointegration. After the extraction, immediate placement of M-implants (Medentika, Hügelsheim, Germany) was performed over the upper and lower alveolar ridges, through which the size of implants was determined using the extraction socket and preoperative evaluation of radiographic data (Fig. 1F–J). Small osseous defects were found around the extraction sockets. Thus, a freeze-dried bone allograft (FDBA, LifeNet Health, Virginia Beach, Virginia, U.S.A.) was grafted adjacent to the implant placement site. Primary suture and healing was achieved. After 6 months, further prosthetic restoration was completed in the prosthodontic division of our hospital. The patient was satisfied with the functional and the esthetic outcome (Fig. 1K–O). The patient was under regular follow-ups.

As a reliable treatment of choice, the immediate placement of dental implants yields several advantages, including reduced treatment or surgery times, greater preservation of the gingiva and alveolar bone, and achievement of an ideal implant location provided by the fresh extraction socket.<sup>1–3</sup> Therefore, we are sharing this report with clinicians to facilitate broader utilization of this

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**Fig. 1** (A–E) Multiple missing teeth and residual roots were revealed with poor oral hygiene and loss of vertical dimension. (F–J) Atraumatic dental extraction of multiple residual roots followed by immediate implant placement was performed using periostomes. After placement of implants, primary closure was obtained. (K–O) Prosthetic restoration was completed 6 months after the placement of implants. The functional and esthetic outcome satisfied the patient.

technique and to increase the possibility of further development of this technique in order to optimize the treatment quality for patients.

### Conflicts of interest

The authors have no conflicts of interest that are relevant to this article.

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