

**CLINICAL ARTICLE**

# Immediate implant placement and loading in the esthetic area when the buccal socket wall is significantly damaged

Federico Tirone DDS  | Francesco Genovesi DDS

Clinica Odontoiatrica Salzano Tirone, Private Practice, Cuneo, Italy

**Correspondence**

Federico Tirone, DDS, Via Cascina Colombaro 37, 12100 Cuneo, Italy.

Email: federico.tirone@gmail.com

**Abstract**

**Objectives:** Recent clinical recommendations contraindicate immediate implant placement when the socket buccal bone plate is significantly damaged. The connective tissue graft (CTG) is increasingly being used in implant therapy and can replace periodontal defects lacking bone wall in periodontal regenerative surgery. Therefore, CTG could be used to allow immediate implant placement and loading even when the buccal socket wall is damaged, facilitating graft material stability.

**Clinical considerations:** In the first case, deep bone dehiscence was caused by a vertical root fracture. In the second case, a big bone fenestration was caused by a chronic endodontic periapical lesion. Both cases were treated with immediate implant placement and loading. A buccal CTG was used to compensate for the lack of bone and allow stabilization of the particulate xenograft in the gap between the implant and the damaged buccal socket wall. In both cases, a provisional screw-retained crown was immediately delivered, and the definitive layered zirconia crown was delivered after 3 months. Esthetic results and patient satisfaction monitored for 1 year after loading proved to be encouraging.

**Conclusions:** Although further investigations with longer follow-up are required, the approach is likely to yield good results after 1 year of loading.

**Clinical Significance:** The purpose of this report is to show a surgical approach that seems to be able to overcome the contraindication of the quoted consensus report, which allows for good esthetic results and patient satisfaction even when the buccal bone wall of the extraction socket has been more than 50% compromised, allowing treatment time and cost reduction.

**KEYWORDS**

esthetic rehabilitation, bone fenestration, deep bone dehiscence, immediate implant loading, immediate implant placement, implants

## 1 | INTRODUCTION

In recent decades, dental implants have been routinely used to completely or partially rehabilitate edentulous patients with dependable long-term results.<sup>1-3</sup> The popularity of post-extraction immediate implant placement has grown over that of delayed implant placement, as it may reduce the treatment time and number of surgical procedures.<sup>4</sup> Animal and human studies have reported successful

outcomes with immediate placement of implants, and immediate implant placement has become a prevalent treatment in dental practice.<sup>5-8</sup>

In cases of severe disease or trauma irreparably damaging the tooth and/or its supporting apparatus, dental extraction is often indicated. Different clinical scenarios may be encountered depending on the extent of the residual alveolar bone. Therefore, a careful examination should be performed before and immediately after tooth