Marquette University
e-Publications@Marquette

School of Dentistry Faculty Research and Publications

Dentistry, School of

1-1-2009

Are the Outcomes of Immediate and Early Single Tooth Implants Comparable to Conventionally Placed Implants?

Gary L. Stafford
Marquette University, gary.stafford@marquette.edu

Accepted version. *Evidence-Based Dentistry*, Vol. 10, No. 3 (2009): 77-78. Permalink. © Nature Publishing Group (Macmillan) 2009. Used with permission.

Commentary

The success rate of dental implants in the aesthetic zone is of particular importance to both the General Practitioner as well as the patients we treat. Having the option to restore an implant immediately after placement rather than fabricating a transitional removable partial denture or simply leaving the space edentulous is of paramount importance to our patients, especially in the aesthetic zone.

In assessing the success rates of immediate, early and conventionally loaded dental implants, a recent study showed that the trends (no statistically significant differences) suggest that immediately loaded implants fail more frequently than those conventionally loaded, but less commonly than those loaded early. Therefore, if one wishes to load an implant early, it might be wiser to load them immediately (within 1 week) as opposed to waiting for 1-2 months.[1]

This systematic review evaluated the outcomes of single tooth implants in the aesthetic zone which had natural adjacent teeth. They then compared immediate (within 48 hrs), early (>48 hrs but <3 months) and conventional (≥ 3 months) loading treatment modalities. Although there are Cochrane reviews evaluating various aspects of dental implants, this systematic review may be considered of special significance because it evaluated those outcomes that are most important to our patients: longevity, aesthetics, and their overall satisfaction with the end result of the treatment.

In terms of longevity, no statistically significant differences in implant survival were found in the clinical trials comparing immediate or early implant procedures with conventional ones. It has been shown that a high degree of implant stability (high value of insertion torque) seems to be one of the prerequisites for a successful immediate/early loading procedure.[2]

In this systematic review, conclusions could not be drawn in terms of marginal bone changes when comparing the different treatment strategies, but it was shown that with respect to the peri-implant mucosa, the clinical crown height was acceptable in significantly more cases in the early placement groups than in the conventional groups. One could reasonably assume that maintaining a clinical crown height that is closer to the “Golden Proportion” would lead to a more ideal aesthetic outcome and therefore higher patient satisfaction.

Even though reported satisfaction levels were high, only four of the studies in this systematic review evaluated this outcome. It is however, possible to suggest that immediate and early implants provide higher patient satisfaction and aesthetic outcomes than the conventional approach, possibly due to the preservation of the alveolar ridge.[3]

Although strong conclusions could not be made about which loading option is the overall treatment strategy of choice, as well as the fact that there needs to be more long-term research in respect to aesthetic outcomes and patient satisfaction; there are tendencies to show that immediate placement and loading of dental implants could lead to a more satisfying experience for the patient, a better aesthetic outcome, and little added risk in terms of implant survival.

Key Practice Points

1. It is possible to successfully load dental implants immediately or early after their placement in selected patients, but careful patient selection and treatment planning should precede this modality.
2. There is an indication that there is a strong correlation between the aesthetic appearance before implant treatment and the final aesthetic result from both the patients' and the clinicians' perspective.

References

1. Esposito M, Grusovin MG, Achille H, Coulthard Paul, Worthington HV,. Interventions for replacing missing teeth: different times for loading dental implants. *Cochrane Database Syst Rev* 2009; issue 1.
2. Esposito M, Grusovin MG, Martinis E, Coulthard P, Worthington HV. The effectiveness of immediate, early, and conventional loading of dental implants: a Cochrane systematic review of randomized controlled clinical trials. *Int J Oral Maxillofac Implants* 2007;22:893-904.
3. Esposito M, Grusovin MG, Koukoulopoulou A, Coulthard P, Worthington HV. Interventions for replacing missing teeth: dental implants in fresh extraction sockets (immediate, immediate-delayed and delayed implants). *Cochrane Database Syst Rev* 2006; issue 4.

Gary L. Stafford DMD

Department of General Dental Sciences

Marquette University School of Dentistry

Milwaukee, WI USA