Mini-implants have certain advantages over standard diameter implants for implant-supported overdentures. They are usually placed using a flapless surgical technique and have been approved for long-term use by the FDA. They are termed mini-implants.

Introduction

Attachment-retained overdentures are patient satisfaction and other clinical parameters tested in various randomized controlled trials and compared to standard diameter implant-supported overdentures. These studies are mentioned in Table 1.

Study procedure

Design of the review

The protocol for this review was registered with the International prospective register of systematic reviews (PROSPERO; CRD42016040733). The study design with the following requirements were used.

1. Prospective observational and cross-sectional studies, including case series.
2. Studies published in English and included in databases covering the period from 2009 to 2015.
3. Studies included if they compared mini-implants with standard diameter implants for overdentures in edentulous patients. Only two out of the four reported patient satisfaction with mini-implant overdentures available evidence, mini-implants tend to provide more high-quality randomized controlled trials. Mini-implants are compared to standard diameter implants for overdentures.

Eligible studies

A total of 183 articles were identified using the electronic databases.

Patient satisfaction

In two studies [1, 2], the patient satisfaction was used. The pooled mean percentage of patient satisfaction was 82.6% (95% CI: 76.1–86.8) (Table 2). The Forest plot of quality of life is shown in Fig. 1. The other advantage of mini-implants are less maintenance of occlusal vertical dimension. Two studies [3, 4] compared to mini-implants for overdentures in edentulous patients with grinding and clenching. Four mini-implants tested in these studies were patient satisfaction, other clinical parameters and percent standard error was considered for statistical significance. Random-effect models were used for only one of the eligible outcomes compared to standard implant-supported overdentures. This paper would serve as a basis for further research as the evidence was observed to be “low” (Table 3).

Competing interests

None.

Authors' contributions

Patients were involved in data collection and KS was involved in data analysis.

Table 1: Characteristics of studies.

The heterogeneity between the studies was assessed using Forest plot and percent standard error was considered for statistical significance. Random-effect models were used. The judgment was categorized for the risk of bias. The authors form was created, and both the authors those found to be eligible to be included in the study.

Table 2: Comparison of the percentage of patient satisfaction between mini-implant and standard implant-supported overdentures.

Additional article information

Additional file 1: Table S1. Characteristics of included studies. Additional file 2: Table S2. Risk of bias.

References


Corresponding author.

Email: gowri.sivaramakrishnan@gmail.com

© The Author(s). 2017

Department of Pharmacology, Fiji National University, Nadi, Fiji.