

Plastic Surgery 2019: Outcomes of pediatric dental rehabilitation following head and neck reconstruction: A systematic review

Georgina Wellstead and Robert Coe

Norfolk and Norwich University Hospital, UK, E-mail: georgina_wellstead@msn.com

Abstract

Introduction: Dental rehabilitation is an important part of a patient's treatment following head and neck reconstruction and can provide significant improvements in both functional and psychosocial outcomes. The current literature is particularly scarce with regards to dental rehabilitation in children. The aim of this work is therefore to examine the best techniques available for paediatric dental rehabilitation, including the ideal sequence of events to support the best outcomes.

Methods: A literature search was performed of all children undergoing dental rehabilitation following head and neck reconstruction between 1975 and June 2019 using the MEDLINE and Cochrane databases. Each article was assessed for inclusion before data was extracted. Data items extracted for each article included: age; primary pathology; surgery; dental rehabilitation details; radiotherapy; functional outcomes; and psychological outcomes.

Results: Six articles were finally in the final analysis, all of which were case reports or case series. The patient's primary pathologies were a mixture of congenital deformities, benign tumours, malignancies and infections. All of the reconstructive options, including free scapular, parascapular, iliac crest and fibula flaps were reported to be successful. Positive outcomes were demonstrated following both immediate and delayed dental rehabilitation with removable and osseointegrated prostheses. Radiotherapy was not performed in any of the cases.

Conclusions: From the cases examined, it has been demonstrated that a variety of osseous free flap reconstructive options can facilitate successful dental rehabilitation in children. However, the outcomes reported for each of the studies varied greatly, with no two studies reporting their outcomes in the same way. Additionally, although this small selection of studies shows some positive results for dental rehabilitation following paediatric head and neck reconstruction, no firm conclusions can be made, particularly regarding long-term outcomes. Many more cases must therefore be reported and examined in order to make any wider-reaching conclusions for paediatric patients.

This work is partly presented at 4th Global Meeting on Plastic, Aesthetic and Reconstructive Surgery on November 07-08, 2019 held at Frankfurt, Germany.