COCHRANE-REVIEW

Eksartikulerede tænder kan under visse omstændigheder rodbehandles før reimplantering

Cochranes forfattere efterlyser veldesignede studier – dansk ekspert efterlyser nye behandlingsmetoder.

Winnie Brodam

Eksartikulerede, reimplanterede permanente tænder heler på to måder, hvis de behandles korrekt. Det skriver Cochranes reviewere i en ny publikation:

- det ideelle er parodontal heling, hvor ligamentet rundt omkring tandroden gendannes – sker det, kan man forvente, at tanden vil overleve lige så længe som en hvilken som helst anden tand,
- når skaden på ligamentet er for stor, sker heling ved knogledannelse. Tanden bliver "erstattet" af knogle, og så vil den kun kunne fungere i en kort årrække

Cochranes review har ledt efter evidens for de gængse metoder til at opnå parodontal heling. Tre studier indgår i reviewet, men studierne har svagheder i deres design, så Cochranes forfattere må nøjes med at konkludere, at det ikke skader resultatet, hvis man udfører rodbehandling, før tanden replanteres – under forudsætning af at den ekstraorale tørreperiode overstiger 60 min.

Kommentar af overtandlæge, odont.dr. h.c. Jens Ove Andreasen:

– Artiklen viser, at randomiserede studier er næsten umulige at gennemføre i relation til dental traumatologi. Reglerne for at gennemføre randomiserede forsøg er nu så komplekse, at man i en akut traumesituation oftest må afstå fra et sådant forsøg. Vi er således stadig nødt til at udvikle nye behandlingsmetoder på basis af dyreforsøg, og indtil disse har vist, at en alvorligt beskadiget rodhinde kan regenerere, må vi nok afvente, at en fremtidig stamcellebehandling kan ændre denne ulykkelige helingssituation for tænder med lang tør ekstra-alveolær periode.

Abstract

Background
Dental trauma is common. One of the most severe injuries is when a permanent tooth is knocked completely out (avulsed) of the mouth. In most circumstances the tooth should be replanted as quickly as possible. There is uncertainty on how best to prepare teeth for replantation.

Objectives
To compare the effects of a range of interventions for managing traumatised permanent teeth with avulsion injuries.

Search strategy
The Cochrane Oral Health Group's Trials Register (to 28th October 2009); CENTRAL (The Cochrane Library 2009, Issue 4); MEDLINE (1950 to October 2009); EMBASE (1980 to October 2009); www.clinicaltrials.gov/; www.controlled-trials.com/ and reference lists of articles were searched. There were no language restrictions.

Selection criteria
Only randomised controlled trials (RCTs), that included a minimum follow-up period of 12 months, for interventions for avulsed and replanted permanent teeth were considered.

Data collection and analysis
Two review authors independently extracted data and assessed trial quality and the risk of bias in studies to be included.

Main results
Three studies, involving a total of 162 patients and 231 teeth were identified. Study one (with a high risk of bias) investigated the effect of extra-oral endodontics. This showed no significant difference in radiographic resorption compared with intra-oral endodontics provided at week 1 for teeth avulsed for longer than 60 minutes dry time. Study two (which had a moderate risk of bias) investigated a 10-minute soaking in thymosin alpha 1 prior to replantation and then its further use as a daily gingival injection for the first 7 days. They reported a strong benefit at 48 months (14% with periodontal healing in the control group versus 77% for the experimental group). Study three (with a high risk of bias) investigated a 20-minute soaking with gentamycin sulphate (4x107 U/L) for both groups prior to replantation and then the use of hyperbaric oxygen daily in the experimental group for 80 minutes for the first 10 days. They reported a strong benefit at 12 months (43 % periodontal healing versus 88% for the experimental group). There was no formal reporting of adverse events.

Authors' conclusions
The available evidence suggests that extra-oral endodontics is not detrimental for teeth replanted after more than 60 minutes dry time. Studies with moderate/high risk of bias indicate that soaking in thymosin alpha 1 and gentamycin sulphate followed by hyperbaric oxygen may be advantageous however, they have not previously been reported as interventions for avulsed teeth and need further validation. More evidence with low risk of bias is required and, with the low incidence of avulsed teeth, collaborative multicentre trials are indicated.

Day P, Duggal M. Interventions for treating traumatised permanent front teeth: avulsed (knocked out) and replanted. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD006542. DOI: 10.1002/14651858.CD006542.pub2