

COCHRANE-REVIEW

Ingen klare svar om skyllemidler til kanalbehandling

Dansk forsker efterlyser klinisk anvendelig evidens.

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Rodkanalskylning i forbindelse med kanalbehandling bliver traditionelt udført med natriumhypoklorit (NaOCl) i forskellige koncentrationer, men der bliver også anvendt klorhexidin og diverse kombinationer af væske, gel og antibiotika. Derfor har et hold Cochrane-reviewere ledt efter evidens for effekt af diverse skyllemidler. Reviewet omfatter 11 studier, og det konkluderer, at natriumhypoklorit er det mest anvendte skyllemiddel efterfulgt af klorhexidin i form af væske eller gel.

Cochranes reviewere har ikke fundet evidens for at anbefale et skyllemiddel frem for andre. De nøjes med at konstatere, at natriumhypoklorit og klorhexidin tilsyneladende er mere effektivt end saltvand – og at eftersmerter tilsyneladende er uafhængige af såvel skyllemidlets art som af dets koncentration.

Kommentar af lektor, ph.d., dr.odont. Lars Bjørndal, Tandlægeskolen i København:

Ovenstående review er på linje med en svensk SBU-rapport, der tidligere har påvist et lavt evidensniveau.

Af de 11 studier, der er inkluderet i Cochrane-reviewet om skylning ved ortograd rodbehandling, er der ingen, der siger noget om effekten efter et års kontrol vurderet ud fra røntgen; effektmålene udgør variationer over postoperative smerter, påvirkning af livskvalitet og andele af positive bakterieprøver efter behandling.

Oversigten advarer imod at sammenligne effekt af skyllevæsker på baggrund af eksisterende litteratur, og oversigten

afspejler først og fremmest, at der er behov for kliniske forsøg, som systematisk sammenligner skyllevæsker.

Inklusionskriterierne i Cochrane-reviewet omfatter alle tandtyper uanset diagnose, og det er problematisk, fordi det er vanskeligt at fortolke smerteresultater, hvis man ikke ved, om der er tale om vitale pulpaer eller nekrotiserede, bakterieinficerede rodkanaler.

Det er også et problem, at man ikke har lavet særanalyse på henholdsvis pulpektomi og nekrotiske, inficerede rodkanaler med eller uden apikal opklaring. Endvidere er kun forsøg med anvendelse af enten natriumhypoklorit eller klorhexidin inkluderet.

Af de tendenser, der nævnes, er, at skylning med klassiske medikamenter såsom natriumhypoklorit og klorhexidin er bedre end saltvand! Men hvordan skal man håndtere dette bløde budskab som kliniker?

Reviewet viser ikke, at en metode er bedre end en anden. Men der er selvfølgelig ikke frit valg på hylderne – man må forholde sig til den højeste eksisterende evidens på området. Samtidig skal man være skeptisk og tilbageholdende med at justere efter behandlingsprotokoller, som måske har vist sig lovende *in vitro*. Hvorfor? Fordi man på den baggrund ikke ved, om det rent faktisk ender med at være bedre end det, man i øvrigt gør.

Så pas på, at din skylleprotokol ikke er endt med at være for besværlig – vi ved ikke, om det hjælper – men de to klassiske skyllemedikamenter er bedre end saltvand – tak for det!

ABSTRACT

Background

Root canal treatment is carried out on teeth in which irreversible pulpitis has led to necrosis of the dental pulp. As a treatment option it is an alternative to dental extraction. Mechanical preparation and irrigation with antiseptic or antibacterial solutions destroys bacteria and cleans the infected root canal. Irrigants should be effective in deactivating bacteria in the entire root canal space without causing any adverse tissue reactions. Sodium hypochlorite (NaOCl) and chlorhexidine are commonly used but there is uncertainty as to which solution, concentration or combination is the most effective.

Objectives

To assess the effects of irrigants used in the non-surgical root canal treatment of mature permanent teeth.

Search methods

We searched the Cochrane Oral Health Group's Trials Register (to 5 July 2012), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2012, Issue 4), MEDLINE via Ovid (1950 to 5 July 2012), EMBASE via Ovid (1980 to 5 July 2012), LILACS via BIREME (1980 to 5 July 2012). There were no restrictions regarding language or date of publication.

Selection criteria

Randomised controlled trials in single or multi-rooted permanent teeth with pulpal or periapical pathology or both, which require root canal treatment. Irrigants either against each other or against inactive irrigant or placebo. Combinations of irrigants were allowed and if used in conjunction with EDTA (ethylenediaminetetra-acetic acid) or similar chelating agents.

Data collection and analysis

Two review authors independently assessed risk of bias of included trials and extracted data.

Main results

We included 11 trials involving 851 participants with 879 teeth which had undergone root canal treatment and involved the use of irrigants. Two trials were assessed as being at low risk of bias, with six unclear and three high. Four trials compared sodium hypochlorite versus chlorhexidine, however, no primary outcomes and only one secondary outcome, bacterial growth cultures, was reported for two of these trials (20% and 50% of teeth in the control group had positive bacterial culture). The meta-analysis indicated no strong evidence of a difference in the existence of bacterial growth between the interventions (risk ratio 0.73; 95% confidence interval 0.34 to 1.56; $P = 0.41$).

The seven remaining trials each compared different interventions and only two of these trials included useable data on the primary outcomes of swelling and pain. One trial compared sodium hypochlorite 5.25% alone versus sodium hypochlorite 5.25% combined with hydrogen peroxide 3%, and versus normal saline and reported pain at 3 to 14 days after the procedure. There was no evidence of a difference in pain between the three groups. The other trial compared sodium hypochlorite 5% versus sodium hypochlorite with 'proteolytic enzyme', and there was no evidence of a difference in swelling between the groups. Two further trials reported bacterial growth, and three trials failed to report any data which could be used in the review. None of the included trials reported any data on adverse effects nor radiological changes in periapical radiolucency.

Authors' conclusions

Although root canal irrigants such as sodium hypochlorite and chlorhexidine appear to be effective at reducing bacterial cultures when compared to saline, most of the studies included in this review failed to adequately report these clinically important and potentially patient-relevant outcomes. There is currently insufficient reliable evidence showing the superiority of any one individual irrigant. The strength and reliability of the supporting evidence was variable and clinicians should be aware that changes in bacterial counts or pain in the early postoperative period may not be accurate indicators of long-term success. Future trials should report both clinician-relevant and patient-preferred outcomes at clearly defined perioperative, as well as long-term, time points.

Fedorowicz Z, Nasser M, Sequeira-Byron P, de Souza RF, Carter B, Heft M. Irrigants for non-surgical root canal treatment in mature permanent teeth. Cochrane Database of Systematic Reviews 2012, Issue 9. Art. No.: CD008948. DOI: 10.1002/14651858.CD008948.pub2.