

COCHRANE-REVIEW

Undersøgelser af forstørrelse efterlyses

Cochranes reviewere har ikke fundet evidens for, at brug af fx mikroskop ved endodontisk behandling forbedrer behandlingsresultaterne. De efterlyser flere undersøgelser.

Winnie Brodam

Man kan ikke drage nogen konklusioner om, hvorvidt brug af mikroskop, endoskop eller lupbriller betyder, at man får bedre kliniske resultater ved endodontiske indgreb.

Sådan skriver forfatterne af et helt nyt Cochrane-review, hvor de har ledt efter studier af betydning af forstørrelsesapparatur. De har ikke fundet evidens, og nu efterlyser de veldefinerede, store, randomiserede undersøgelser.

Forfatterne skriver, at man savner systematik og især kliniske indikationer for brug af de enkelte forstørrelsesapparaturer i specifikke kliniske situationer – kort sagt: Hvornår skal man bruge hvad og hvor? Og så efterlyser de studier, som undersøger den reelle forskel i behandlingssucces af endodontisk behandling med og uden forstørrelse. "If any exist", skriver de.

Kommentar af afdelingsstandlæge Jens Knudsen, Tandlægeskolen i Århus:

– Konklusionen i Cochranes review forekommer baseret på et lidt tyndt grundlag med et fokus, som ikke kan genkendes af den, som anvender forstørrelsesapparatur i endodontisk klinik i dagligdagen.

Forstørrelsesapparaturets nytteværdi kan ikke beskrives med svar på spørgsmålet: "Får man bedre kliniske resultater?" Skulle man være lidt grov, ville det svare til, at man søgte evidens for betydningen af synsbesværedes brug af briller.

Mikroskop og andet apparatur er hjælpemidler, som udvider mulighederne for at løse en række endodontiske problemer, som ikke eller kun usikkert kan løses uden forstørrelse. Man behandler ikke eller kun mikroskop generelt, men diagnosticerer, kontrollerer og foretager enkelte behandlingsfaser med forstørrelse.

At fjerne vævsrester, fremmedlegemer og andet inficeret materiale kan foretages målrettet og ikke i blinde, fordi man kan se. Selv om man ikke behandler konstant under mikroskop, må man ikke undervurdere den pædagogiske effekt af at have set, hvor stor betydning det har for kanaludrensningen, at man følger fastlagte procedurer. Eksempelvis ved alle, der arbejder med mikroskop, at der under kanalrevision altid efterlades rodfyldningsmateriale, som givetvis er inficeret, medmindre man målrettet og under direkte lys og forstørrelse fjerner materialet. Det samme gælder vævsrester i rodåbne tænder.

Diagnostik og behandling af "ekstra" kanaler, parietale perforationer, dybtliggende kanaldelinger, kanalrecesser og -kommunikationer, lokalisering og behandling af nekrotiske lumina i invaginerede tænder, fjernelse af filstumper og dentinøer, lokalisering af "oblitererede" kanaler mv. kan ifølge sagernes natur ikke eller kun usikkert foretages uden direkte lys og forstørrelse.

Reviewets konklusion skulle nødtigt influere negativt på den gryende forståelse for teknologiske hjælpemidlers betydning for kvalitet og muligheder i endodontien i Danmark.

Abstract

Background

After the introduction of microsurgical principles in endodontics, involving new techniques for root canal treatment, there has been a continuous search for enhancing the visualisation of the surgical field. It would be interesting to know if the technical advantages for the operator brought in by magnification devices like surgical microscope, endoscope and magnifying loupes, are also associated with advantages for the patient, in terms of improvement of clinical and radiographic outcomes.

Objectives

The purpose of this systematic review was to evaluate and compare the effects of endodontic treatment performed with the aid of magnification devices versus endodontic treatment without magnification devices. We also aimed at comparing among them the different magnification devices used in endodontics (microscope, endoscope, magnifying loupes).

Search strategy

The Cochrane Oral Health Group Trials Register, CENTRAL, MEDLINE and EMBASE were searched with appropriate search strategies. Handsearching included nine dental journals. The bibliographies of relevant clinical trials and relevant articles were checked for identifying studies outside the handsearched journals. Seven manufacturers of instruments in the field of endodontics and/or endodontic surgery, as well as the authors of the identified randomised controlled trials (RCTs) were contacted in order to identify unpublished or ongoing RCTs. There were no language restrictions. The last electronic search was conducted on 2nd April 2009, and the last handsearching was undertaken on 31st January 2009.

Selection criteria

All randomised and quasi-randomised trials comparing endodontic therapy performed with or without using one or more types of magnification device, as well as randomised and quasi-randomised trials comparing two or more magnification devices used as an adjunct to endodontic therapy were considered.

Data collection and analysis

Screening of studies and data extraction were conducted independently and in duplicate. The Cochrane Collaboration statistical guidelines were to be followed for data synthesis.

Main results

No trial could be included in the present review. All of the prospective trials that were identified, all dealing with endodontic surgery, had to be excluded for various reasons. Only one RCT was identified comparing three magnifiers (magnifying loupes, surgical microscope, endoscope) in endodontic surgery. No RCT was found that compared the outcome of endodontic therapy using or without using a given magnification device.

Authors' conclusions

No objective conclusion can be drawn from the results of this review as no article was identified in the current literature that satisfied the criteria for inclusion. It is unknown if and how the type of magnification device affects the treatment outcome, considering the high number of factors that may have a significant impact on the success of endodontic surgical procedure. This should be investigated by further long-term RCTs with large sample size.

Technical advantages of magnifiers have been widely reported in low evidence level studies, but they should be systematically addressed to know if there can be the clinical indication for using a given magnification device for specific clinical situations, such as for molar teeth, or if they can all be used interchangeably.

Well-designed RCTs should also be performed to determine the true difference in terms of treatment success rates between using or not using a magnification device in both conventional and surgical endodontic treatment, if any exist.

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