

RESEARCH SUMMARY

Direct restorations, endodontics and bleaching

Contemporary dental practice in the UK: aspects of direct restorations, endodontics and bleaching **N. H. F. Wilson, G. J. Christensen, S. W. Cheung, F. J. T. Burke and P. A. Brunton** *Br Dent J* 2004; **197**: 753–755

Objectives

To investigate by questionnaire, the use and selection of materials and techniques for the placement of direct restorations and the provision of endodontics and bleaching by dental practitioners in the North West of England and Scotland.

Methods

A questionnaire was sent to 1,000 general dental practitioners selected at random from dentists in Scotland and the North West of England. Non-responders were sent another questionnaire after a period of 4 weeks had elapsed.

Results

A total of 701 usable questionnaires were returned, giving a response rate of 70%. The most commonly used material for the restoration of Class II cavities in premolar and permanent molar teeth was amalgam ($n = 605$, 86%) and ($n = 634$, 90%) respectively. Many practitioners ($n = 419$, 60%) felt amalgam should continue to be used; but a majority ($n = 374$, 66%) remained unconvinced about the merits of amalgam bonding. A minority ($n = 63$, 9%) of practitioners used predominantly directly placed resin composite rather than amalgam to restore Class II cavities in premolar and permanent molar teeth. Home-based vital bleaching was provided by a significant number ($n = 245$, 35%) of practitioners with only 18% ($n = 123$) providing practice-based bleaching. The most commonly used endodontic obturation technique was cold lateral condensation ($n = 527$, 75%) with 61% ($n = 425$) of respondents not using rubber dam routinely for endodontics.

Conclusions

For the practitioners in this survey; amalgam was the most frequently selected direct restorative material. Few practitioners used amalgam bonding let alone direct resin composite for posterior restorations. Home-based rather than practice-based bleaching procedures were preferred; as were more traditional endodontic obturation techniques.

IN BRIEF

- Amalgam continues to predominate as the restorative material of choice for the restoration of permanent teeth.
- Glass ionomer cements are widely used as luting cements and as bases and restorations by younger practitioners.
- Rubber dam is not used routinely.
- Stainless steel crowns are placed by a minority of practitioners for the restoration of deciduous molars.

COMMENT

This paper is one of a series of three investigating aspects of general dental practice by a questionnaire survey, and looks at three areas of clinical practice. Although the authors acknowledge the limitations of the study, it does provide an insight into the materials commonly used in direct restorations and of techniques used in endodontics and bleaching.

As would be expected, where the majority of respondents worked in NHS practice, amalgam was the commonest restorative material for Class II cavities in premolars and molars, with only a minority (between 5% and 9%) using composite. What is clear from this study is that practitioners still believe that amalgam remains the treatment of choice for posterior restorations. This may be a result of GDS regulations, but is more likely due to the lack of convincing scientific evidence that the composite is a better material in this situation.

It was interesting to note that only 54% of practitioners in this study used glass ionomer cement as a restorative material. The indications for use of this material may not have been fully appreciated by the respondents or alternatively they may not have been convinced by the available scientific evidence for their use in a number of clinical situations.

What is unsurprising is that despite the controversy surrounding the provision of bleaching in general practice, practitioners (35% – 52%) continue to provide this service for their patients. The side effects reported in this study, although not scientifically valid, concur with other evidence with regard to sensitivity¹ but are at variance regarding gingival health.² Further research including randomised controlled, double blind clinical trials, is needed to examine these factors and the risk of other adverse effects related to bleaching teeth.

Given that endodontic treatment is performed routinely in general practice it was disconcerting to find that 25% of GDPs considered root canal therapy to be unsafe. As the authors point out, this may be due to the large number of practitioners who perform this procedure without rubber dam. The need for further research investigating the barriers to the use of rubber dam has again been highlighted.

This study also contributes to the debate on how best, if at all, practitioners can restore deciduous teeth. The general practitioner respondents used glass ionomer cements routinely in the restoration of the primary dentition and there was little use of stainless steel crowns. The authors have suggested that this is also an area for practice-based research.

In conclusion, this paper recognised more questions than it answers for the reader. It acts as a powerful stimulus for developing a programme of practice-based dental research. The majority of patient care is provided in the 'real world' of general dental practice so this is where good quality research should be developed and funded. It is hoped that funding bodies will recognise this and respond.

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