IN BRIEF

- The use of posterior composites appears to be increasing.
- Techniques used are in line with current thinking.
- For posterior composites there is some confusion over the need for rubber dam and use of lining materials.
- There is also confusion over the most appropriate restorative material to use in a pregnant patient.

GDPs' attitudes to posterior composites

Attitudes of general dental practitioners in the UK to the use of composite materials in posterior teeth

A. S. M. Gilmour,¹ P. Evans² and L. D. Addy³

ABSTRACT

Objective

To determine the opinions and current methods used in placing posterior composite restorations by general dental practitioners.

Setting

The study was completed by general dental practitioners randomly selected from across the UK.

Method

A questionnaire was devised to gain this information. It was sent to 500 UK dentists chosen at random from the general dental register, with an explanatory letter and reply-paid envelope.

Results

Two hundred and sixty-seven replies were received. Sixty-one percent of dentists felt amalgam use had decreased over the last five years, 75% felt posterior composite use had increased. Regarding choice of posterior material, almost all cited clinical indication as the most influential factor while patient's aesthetic demands (89%), wish for a certain material (78%) and the dentist's confidence using a certain restorative material (76%) were contributing factors. Regarding the techniques used, contemporary techniques were employed although there was confusion regarding the need for rubber dam and the most appropriate method of lining the cavity. A case scenario of a pregnant patient who required treatment found that 66% of respondents would place a restoration other than a temporary dressing, with 16% placing an amalgam restoration.

Conclusions

The majority of dentists surveyed place load bearing posterior composite restorations regularly. Their choice of restorative material is influenced by clinical indications and the patient's aesthetic demands. The techniques used were appropriate, although there was confusion around the need for rubber dam and the most appropriate method to line the cavity. There was also confusion in relation to the most appropriate materials for use in pregnancy.

EDITOR'S SUMMARY

Asking practitioners what they do and what materials they use seems a sensible approach to discovering what happens in the real world rather than in the theoretical realms of what should be being done. This research carried out on a sample of GDPs has elicited some useful indicators on the state of composite resin usage for posterior restorations and of how opinion has shifted in recent years. It is information that we will have to rely on gleaned from surveys such as this in future, as the appearance of the UDA and the demise of the unique data gathering function of the Dental Practice Board are a significant loss to future oral care analysis, as I have written here previously.

The choice of composite materials for posterior restorations is fascinating in several ways since it holds up a metaphorical, and in some ways an actual, mirror to the manner in which so many decisions are reached in everyday practice. Thus, while their use has increased in recent years there has also been a balance struck between aesthetics and function, science and patient preference, benefits and disadvantages of these materials and the main alternative, amalgam. How far all these conflicting factors have played a part is difficult to tease out from the various attitudes expressed here. What might be observed is that plainly we are not all using composites for this restorative purpose and that predictions of a few years ago of the imminent demise of amalgam for health, aesthetic or any other reasons seems now to have been premature. Additionally as the main author points out we are still unsure of the longer term consequences of using composite materials.

Whatever the future holds this paper underlines the complex decision processes involved in making what might after all be considered a straightforward choice between materials but which implicate clinical, scientific, social, financial and practical factors. Who said dentistry was easy?

The full paper can be accessed from the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 202 issue 12.

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FULL PAPER DETAILS

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AUTHOR QUESTIONS AND ANSWERS

Why did you undertake the research?

I undertook the research for a number of reasons. Firstly following on from the BATCD meeting in Birmingham (2005) we have had internal discussions about increasing our teaching on posterior composites. This has met some resistance and I wanted more information from the primary care environment to inform these discussions. Secondly, I have had a long-term interest in bonding and composite materials and undertake postgraduate lectures in this area. It was clear to me that there were a number of common problems/issues that clinicians had in this area. They were confused by the scientific literature and the conflicting advice given at meetings. This study was aimed at identifying these areas of confusion and highlighting that the dental literature had no clear answers for these areas. Also I was concerned that the guidance given in 1998 by the CDO/CMO on the use of amalgam and other materials in pregnancy had been forgotten. This was an opportunity to revisit this area and remind colleagues.

What would you like to do next in this area to follow this work?

This area of research helps to inform our teaching and our other research. We are undertaking another questionnaire to refine the questions and ask specific questions about techniques used, especially in relation to matrix bands, linings and other issues. This will help refine the protocols we use in our teaching and allow us to have meaningful discussions with our teaching colleagues. The difficulty of achieving good contact points is one question that we are keen to address. The questionnaire will identify which matrix systems are used in this area and a parallel study will test matrices on an *in vitro* model for their ease of use and effectiveness. Finally, I have a research interest in what is released from resin-based dental materials and our finding that these materials are used in pregnancy and young children will help us to explain our concerns about the use of these materials in such groups.

Dr A. Gilmour

COMMENT

Composite resin has become an increasingly popular material for use in the restoration of load-bearing cavities in posterior teeth, as noted in previous surveys based in general dental practice.¹ Educational surveys also support these trends.² The information being reported in this paper by Gilmour, Evans, and Addy provides further useful information on the prescribing habits and attitudes to the use and placement of composite resins in posterior load-bearing cavities by general dental practitioners (GDPs).

The authors surveyed a group of 500 GDPs, from which a response rate of 54% was achieved. The results indicate that the use of composite resin in posterior load-bearing cavities is on the increase, with a concomitant decrease in the use of silver amalgam. This paper reveals, however, that there is confusion surrounding the use of certain clinical techniques, such as the use of rubber dam, the means of protecting operatively-exposed dentine and the selection of appropriate restorative materials in pregnant patients.

Interestingly, 25% of respondents did not consider a lack of familiarity with composite resin materials to be a contraindication to their use in posterior teeth! Despite an increased feeling amongst respondents that composite resins have become more predictable, it was anticipated that composite resin would not replace silver amalgam as a 'material of choice' for restoring posterior cavities during the next ten years.

In conclusion, this paper reports important information on contemporary prescription, attitudes and use of composite resin in posterior load-bearing cavities by GDPs. It further defines a need for further investigation in the prescription habits of general practitioners, and also of the biological and mechanical effects of the clinical techniques used for the restoration of posterior teeth with composite resin.

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