

# Sealant restorations — Is there a reluctance to use them in adult patients?

*An investigation into sealant restoration usage in general dental practice in England* by D. C. Hassall and A. C. Mellor  
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## Aim

A study was undertaken to investigate attitudes to sealant restorations and their usage in general dental practice in England.

## Method

Seventy three dentists in three areas (Doncaster, Hereford/Worcester and Wycombe) provided retrospective details of treatment provided over a one year period for 4,250 6–12 and 13–15 year old subjects. Fifty nine of these dentists then completed a telephone questionnaire relating to their treatment patterns and attitudes to sealant restorations.

## Results

The treatment data indicated that only 59 of the 4,250 children received a sealant restoration during the study period. Of the 44

dentists who claimed in the questionnaire to be using sealant restorations, only 28 had placed them in their selected patients.

## Conclusions

Positive attitudes to sealant restorations were expressed but also concerns that may be prejudicing usage.

### In Brief

- 81% of general dental practitioners claimed to be using sealant restorations on their child patients
- 59 out of 4,250 6–12 and 13–15 year-old subjects received a sealant restoration during the study period
- Positive attitudes to sealant restorations were expressed but also concerns which may be prejudicing their use

## Comment

Dental caries is a disease that has undergone dramatic changes in its prevalence,<sup>1</sup> and in addition it is becoming primarily a disease affecting the pits and fissures, especially in the permanent dentition. Thus there are proportionally fewer smooth surface lesions. For example, in a sample of American school children 88% of the caries was found in pit and fissure surfaces.<sup>2</sup> Ripa *et al.*<sup>3</sup> in their 1988 study reported that the percentage of first molars with occlusal caries or restorations increased by an annual rate of around 10% over a 3-year period. We therefore have a clinical picture of a need for occlusal restorations amongst young people. Practising dentists must address the problem of how these teeth should be restored. Posing such a question before 1970 would have raised many a wry smile — amalgam was all dentists had to use. However, Simonsen's work in the 1970s offered an alternative, the sealant restoration, which had a number of advantages over amalgam, namely:

- Adhesive retention, reducing the amount of tooth tissue that had to be removed
- Effectively buried the practice of exten-

sion for prevention, whereby healthy occlusal enamel is destroyed. Only cari-ous enamel is removed and the rest of the fissure is sealed

- Aesthetically more pleasing than enamel
- Less invasive for the patient.

So here we have a technical advance which brings benefits to the patient and the clinician ... wonderful news.

Well it appears from the work of Hassall and Mellor that a new era in the dental care of occlusal lesions of permanent molars has struggled to gain acceptance, despite the advantages. The reasons for this reluctance are hard to delineate given that the sealant restoration is not a particularly difficult clinical task and offers an incentive in terms of minimal loss of tooth tissue. Indeed one could speculate that most postgraduate deans would be reluctant to fund a course about how to place a sealant restoration given its simplicity.

This paper does not provide all the answers to the conundrum of lack of use of the sealant restoration but it does highlight a common feature of human behaviour. That is our tendency to believe in

something but not to translate that belief into action. Smoking, drinking, exercise and safe sex are all aspects of human behaviour where change is difficult to implement and sustain. Just why offering sealant restorations should fall into this cadre of difficult behaviours to change is hard to explain. Hassall and Mellor have challenged the dental profession to accept a simple change to our clinical practice, surely it's a task that is well within our capabilities. Let us hope that amalgam restorations in the occlusal surfaces of permanent molars will be consigned to the history books.

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- 1 Moller I J, Downer M C. Caries status in Europe and predictions of future trends. *Caries Res* 1990; 24: 381-396.
- 2 Brunelle J A, Carlos J P. Recent trends in dental caries in US school children and the effect of water fluoridation. *J Dent Res* 1990; 69: 723-727.
- 3 Ripa L W, Leske G S, Varma A O. Longitudinal study of the caries susceptibility of occlusal and proximal surfaces of first permanent molars. *J Public Health Dent* 1998; 48: 8-13.