

Letters to the editor

Send your letters to the Editor, *British Dental Journal*, 64 Wimpole Street, London, W1G 8YS. Email bdj@bda.org. Priority will be given to letters less than 500 words long. Authors must sign the letter, which may be edited for reasons of space.

Dementia and periodontal disease

Periodontitis to dementia or converse?

Sir, we write in response to the publications that the *BDJ* supports describing the association between dementia and periodontal disease.

It is fairly well established that those suffering with Alzheimer's disease (AD) and dementia are found to have a greater incidence of periodontal disease. However, not all patients with 'chronic' periodontitis and *P. gingivalis* suffer from AD.

The evidence published in the *BDJ* appears to support dementia being a risk factor for periodontal disease. We propose to support that the reverse relationship exists – that periodontal disease is a risk factor for AD. We would argue that the epidemiological link and laboratory-based investigations suggest periodontitis only becomes a risk factor for AD some ten years after its initial diagnosis.

This would imply that studies conducted in less than ten-year cohorts such as the one by Stewart *et al.*¹ would provide inconclusive results.

Amyloid-beta (A β) deposition in human brain occurs decades before the clinical symptoms (cognitive deficit) appear and some research suggests the increase in A β deposition in human brains correlates with severe periodontal disease.

It is therefore plausible to suggest that the pathogen load (poor oral hygiene, as reflected by pocket depth) is the likely risk for a subset of AD patients. A chronic *P. gingivalis* oral infection in mice does reproduce the AD defining lesions (A β and neurofibrillary tangles) with AD-like phenotype.²

Additionally, the cysteine proteases (gingipains) can degrade the tau protein that binds neurofibrillary tangles in AD³ and little is known about its toxicity to neural tissue.

With fear of AD manifesting in later life, NHS England provides a recommendable

oral health toolkit for the elderly to maintain better oral hygiene.

In addition, the 'Eatwell' diet appears to be an integral part of dementia-free old age and we request for daily exercise and sleep hygiene to be incorporated into the broader picture of prevention.⁴

A. Harding and S. K. Singhrao,
Preston, UK, by email

References

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2. Singhrao S K, Olsen I. Assessing the role of *Porphyromonas gingivalis* in periodontitis to determine a causative relationship with Alzheimer's disease. *J Oral Microbiol* 2019; **11**: 1563405.
3. Dominy S S, Lynch C, Ermini F *et al.* *Porphyromonas gingivalis* in Alzheimer's disease brains: Evidence for disease causation and treatment with small-molecule inhibitors. *Sci Adv* 2019; **5**: aau3333.
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Amalgam

Amalgam policy

Sir, I enjoyed reading the recent letter¹ to the editor by Y. Y. Takefuji, Fujisawa, Japan, about amalgam restoration.

I have been involved in restoring teeth by amalgam restorations for about 60 years. I have done thousands of amalgam restorations. I am still restoring teeth with amalgam restorations.

Amalgam restorations last a long time if properly done. I have radiographs of two premolars with amalgam restorations, the restorations are more than 46 years old. I have seen another patient who has nine restorations done over 39 years and none of these restorations have been repeated.

My experience over the years is that amalgam is the cheapest and best filling material. Amalgam restorations are supported by sound tooth while composite

restorations are supported by demineralised tooth structure.

I have never come across a dentist who has suffered from mercury poisoning.

L. K. Bandlish, London, UK, by email

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Environmental awareness

The environmental impact of dentistry

Sir, with all the moves to eliminate mercury and amalgam, has anyone considered the impact of the packaging waste we produce, as we aim to keep our instruments sterile and store them for the appropriate length of time?

I have no issue with sterile instruments, particularly forceps and invasive instruments.

But how often, for example, is it that a plastic X-ray holder is washed, disinfected, sterilised and put into a date-stamped bag only to be ripped open sometimes two minutes later, as it is needed in a busy practice? The bag is paper and plastic. We once stored these sensibly in a clean plastic box and rotated.

Recently, I had to throw away a plastic saliva ejector that had no expiry date ahead of CQC. I think we all know that from Blue Planet plastic lasts forever!

Dental materials have to be thrown away if they exceed their expiry date. Do all materials spontaneously and suddenly stop being fit for purpose?

At the same time, NHS England tells us that out of date Epipens are safe! What are we doing?

I saw just recently that supermarkets now sell food past their best before date in a bid to cut waste

Overjoyed.

P. Bardolia, Wirral, UK, by email

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