apical periodontitis and root filled teeth, and between periapical health and the technical quality of the root canal treatment, was further confirmed in a recent paper<sup>11</sup> in the *BDJ*. In addition, papers contrary to the views of Ray and Trope<sup>12</sup> and the many deficiencies of the study by Tickle *et al.*<sup>13</sup> have been pointed out in letters<sup>14-16</sup> to the *BDJ*.

We think this paper by Hansrani should have been rejected. It is unfortunate at a time where our medical colleagues are insisting on placing evidence within the context of systematic reviews<sup>17</sup> that there is publication space for the opposite.

B. S. Chong, A. M. Berman, G. Billis, A. M. Quinn, C. D. Emery, G. Di Filippo, London; H. F. Duncan, Dublin; E. Schäfer, Münster; N. P. Chandler, Dunedin DOI: 10.1038/sj.bdj.2016.71

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The author Virat Hansrani responds to the above letters: I thank the authors of these two letters for their comments. The main cause of concern in this article stems from the rather general title, which in hindsight may not have helped. However, the detailed abstract should have cleared any confusion in understanding the learning objectives of the article, which I feel have been misinterpreted.

One objective of the article, as per the abstract, was to 'discuss why a root filling that appears satisfactory on a radiograph may fail, and why one which appears unsatisfactory on a radiograph may succeed.' Perhaps this would have been a better title. Other objectives were to discuss the criteria of endodontic success and failure and its implications on the decision to re-treat.

I acknowledge the concerns regarding the European Society of Endodontology (ESE)<sup>1</sup> guidelines. According to these, when assessing the outcome of root canal treatment, root canal treatment has either a favourable outcome, uncertain outcome, or an unfavourable outcome and there is an exception too. More detailed and accurate ESE guidelines for an unfavourable outcome are (1) the tooth is associated with signs and symptoms of infection; (2) a radiographically visible lesion has appeared subsequent to treatment or a pre-existing lesion has increased in size; (3) a lesion has remained the same size or has only diminished in size during the four-year assessment period; (4) signs of continuing root resorption are present. I acknowledge the idea of anachoresis is an outdated theory.

Comments to Jivraj et al.: I acknowledge that no reference was made to cone beam computed tomography, and its usefulness could have been included as an adjunct to radiographs. The following examples provided by Ng et al.<sup>2</sup> which were not discussed in my article, can also provide reasoning behind why a radiographically successful root filling may fail and why a radiographically unsuccessful root filling may succeed: absence of a pre-operative sinus tract, achievement of patency at canal terminus, extension of canal cleaning as close as possible to its apical terminus, use of ethylenediamine-tetra-acetic acid (EDTA) solution as a penultimate wash followed by a final rinse with NaOCl solution in secondary RCT cases and absence of tooth/root perforation. It is important to understand that some of these examples Ng et al. provided are visible on a post-operative radiograph (canal cleaning as close as possible to canal terminus) and others are not (use of EDTA). This was the key theme running through the article, and advice was provided to help clinicians elucidate under what conditions the root filling was conducted.

I understand why Jivraj et al. feel the article could mislead the readers into thinking that obturation is of no significance. To remove this concern, we must re-refer back to the abstract and learning objectives of the article. One objective was to discuss why a radiographically unsatisfactory root filling may succeed. This article identifies obturation as being one of few features visible on a post-operative radiograph, and thus states that other features which are integral to a successful root filling, may not be visible on a post-operative radiograph. For example, the quality of disinfection. At this stage, I must state that a good quality obturation is a major contributory factor to 'success' and I was not trying to diminish its importance; rather stating that there were other features during root canal preparation which are also contributory to the success even though they are not visible on a radiograph.

Comments to Chong et al.: I acknowledge that the interchangeable use of periradicular periodontitis, periapical periodontitis and apical periodontitis may lead to confusion amongst readers. At the time of writing this article, I did not have access to sufficient clinical exposure to take my own radiographs, hence they were referenced from another BDJ article. I appreciate that I could have included in the figure legend that one radiograph (Fig. 2) presented in the article did not meet the ESE guidelines and the other two radiographs (Fig. 2 and Fig. 3) were diagnostically acceptable.

The authors made reference to Di Filippo et al.<sup>3</sup> who assessed the quality of root fillings as adequate or inadequate based on ESE guidelines.<sup>1</sup> Di Filippo found inadequately root filled teeth were associated with apical periodontitis in 68.6% of cases compared with 14% of cases with adequately root filled teeth. My article discusses why these adequately root filled teeth may have failed and why the inadequately root filled teeth succeeded.

Overall my article made no claim that canal obturation was not required. I understand that it is a major contributory feature in the success of root fillings. I was discussing why root fillings, which may look satisfactory on a radiograph, can fail and why some root fillings which look unsatisfactory can succeed. In doing so, I was discussing which features important to the success of endodontics are seen on a post-operative radiograph and which are not seen on a post-operative radiograph.

I would like to thank all the authors for taking the time to read and so thoroughly provide their feedback on my article. This has been very instructive to me for my future work and I hope, thanks to the open stance of the BDJ, also demonstrates the value of frank opinion sharing in ongoing peer review in scientific publishing for the benefit of all. DOI: 10.1038/sj.bdj.2016.72

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- Ng Y L, Mann V, Gulabivala K. A prospective study of the factors affecting outcomes of non-surgical root canal treatment; part 1: periapical health. *Int* Endod J 2011: 44: 583-609.
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### Accidental cheek fistula

Sir, a 49-year-old male patient with no systemic medical history other than controlled diabetes came to the Department of Dentistry, Jeju National University Hospital. The patient underwent intraoral incision and drainage for swelling on the right side of his face that began to develop a year previously. Due to a relapse, the patient was prescribed with antibiotics from a local clinic. But as his condition did not heal, the patient was referred to the department of dermatology, then to plastic surgery and dentistry.



Fig. 1 Fistula formed through the skin

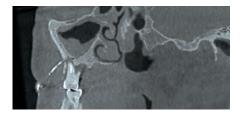


Fig. 2 Accidental tracing with calcium hydroxide agent in CBCT image

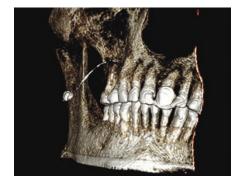


Fig. 3 Accidental tracing with calcium hydroxide agent in 3D image

A protruding lesion was observed around the retracted skin on the right cheek of the patient (Fig. 1). In the intraoral radiographic imaging, a dilated root lesion of dental origin in the maxillary first molar tooth was seen and the patient was diagnosed with buccal fistula of dental origin, and was given endodontic treatment. A water-soluble agent made of calcium hydroxide was applied to control the root canal infection. In a cone beam CT image conducted to check for the presence of maxillary sinus infection, the pushed-out agent showed a sinus tract from the tooth root to the buccal fistula (Figs 2-3).

There were no side effects due to the pushed out agent and all symptoms disappeared within four months of the conservative endodontic treatment. The fistula was obliterated and a scar formed (Fig. 4).



Fig. 4 Healing of fistula with scar

Se Hoon Kahm, Sung-Joon Kim, Korea DOI: 10.1038/sj.bdj.2016.73

# **DENTAL VOLUNTEERING**

# Rewarding and affirming

Sir, I have recently returned to the UK following four months in East Africa volunteering my dental skills. People in developing countries can have daily struggles against all kinds of adversity including securing shelter, finding food for their families and paying for school fees – so let's make toothache one less thing for them to worry about.

Dental volunteering should not just be for undergraduate students on elective. Experienced clinicians have a great deal to offer and don't need any specialist skills. In countries with limited dental services, patients present in chronic pain of many years' duration, with recurrent infections and externally draining fistulas as well as more routine problems which would otherwise go untreated. In the countries where I worked, antibiotics were freely available without a prescription and over-used repeatedly in the absence of basic definitive treatment. I found that most patients displayed an unflinching resilience during treatment; they responded enthusiastically to preventive advice and showed their appreciation with gifts such as crates of mangoes and fresh fish.

I call to action the UK dental profession to do our part in easing the lives of those in developing countries. Yes, there are financial implications; however, fundraising opportunities exist and loyal patients from the UK are often willing to donate to the cause if made aware of it. Flight expenses aside, the cost of daily living in most developing countries is minimal. The opportunities available range from basic extraction camps, care in practice or hospital settings to sustainable teaching programmes. Dental charities operate in Africa, Asia, South America, Palestine and even Afghanistan. Dentists, dental therapists and dental nurses are welcomed in positions lasting from two weeks to two years.

With the daily frustrations of dentistry in the UK, it's rewarding and affirming to work where our skills are highly needed and appreciated. The experience has certainly reminded me why I wanted to work in dentistry in the first place.

M. Young, Edinburgh DOI: 10.1038/sj.bdj.2016.74

#### **DENTAL PUBLIC HEALTH**

#### The late Professor Aubrey Sheiham

Sir, dental public health and indeed health promotion in general has lost a resolute champion with the passing of Professor Aubrey Sheiham. His contribution to this field has been enormous and many, like ourselves, will miss his great enthusiasm for and critical analysis of this vital field.

When the UK Health Education Council together with the British Association for the Study of Community Dentistry convened a meeting in 1975 to define and establish a scientific basis for dental health education, Aubrey Sheiham was one of the experts involved. The meeting led to the publication of the first edition of the Scientific Basis of Oral Health Education and with great enthusiasm he acted as a scientific advisor to all successive editions. Indeed when invitations were sent out to join the scientific advisory panel, Aubrey was always the first to respond.

We will greatly miss his staunch support for this document, which for 40 years has benefited from his sound advice. We would also like to note, with gratitude, his role advising the former Health Education Authority on dental public health for part of its existence.

R. S. Levine OBE, Leeds; C. Stillman-Lowe, Reading DOI: 10.1038/sj.bdj.2016.75

Editor-in-Chief's note: An obituary for Professor Sheiham is published in this issue.