

DISAPPOINTINGLY LITTLE EVIDENCE

Sir, the *BDJ* has played a significant role introducing the concept of evidence-based dentistry. It is disappointing therefore to read so little scientific evidence supporting the processes and materials recommended in *Impressions in implant dentistry* (*BDJ* 2011; 211: 361-367). I have to say at the outset that 'Dispatching the impression(s) in a sealed box, rather than a polythene bag will ensure that they are not damaged and delicate components are not dislodged' does not engender much confidence where any science is concerned!

Nowhere in the article do we find any scientific evidence in support of the chosen materials and methods used for taking accurate impressions and manufacturing a precise replica or 'working model'.

Historically, the choice of dental impression and model materials in practice is often made on an empirical basis and as the article acknowledges, the replication of the geometry of the clinical landmarks is pretty critical. Any errors in location of the implant supported frameworks may result in loosening of the implants themselves. It is incredibly difficult choosing the right combination of materials to use in conjunction with a customised impression matrix to capture reliable data for use in the manufacturing of precisely fitting dental prostheses. The dental impression is only the beginning of a complex set of operations that must be the subject of an overall manufacturing process control (CAD/CAM) designed to create and harvest validated clinical data.

A significant amount of research has been carried out at Renishaw Plc into the veracity of impression and replicating materials where we have been able to compare the replicated models with the clinical geometry using Mitutoyo Coordinate Measuring Machinery (CMM) and Incise Contact Scanners calibrated to ISO 10360 Pt IV. A property that is not mentioned in the article, but which we found to be of very great significance, is the viscosity of the impression materials themselves and the design of the impression trays, which should be perforated. The best results were consistently within an error budget of 25 microns and this research

has been reported in a Monograph.¹

Now that we have the computerised tools to engineer dental prostheses and mill implant frameworks to fit within precise metrology limits, it would be beneficial for *BDJ* readers to see the scientific evidence in support of methods prescribed for taking accurate impressions and creating precise replica models for use in dentistry.

N. J. Knott
Chippenham

1. Knott N J. *A precise metrology comparison of dental impression materials*. Eschenburg: Kettenbach GmbH, 2010.

DOI: 10.1038/sj.bdj.2012.5

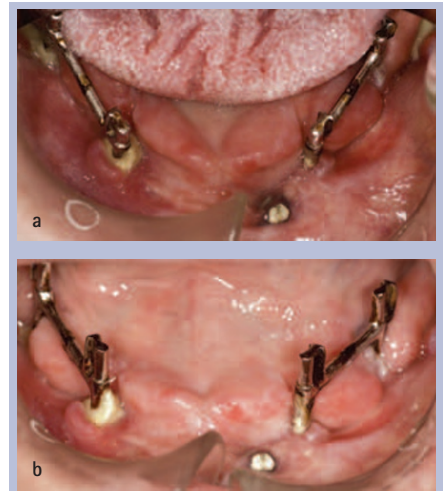
SUBPERIOSTEAL IMPLANTS

Sir, a 74-year-old patient was referred to the oral surgery department by her general dental practitioner. On consultation, the patient complained of a loose lower complete denture. She reported that she had undergone implant placement some 20 years previously in South Africa and that she had not attended for dental examination since.

Clinical and radiographic examination revealed a subperiosteal mandibular implant (Figs 1-2). The bar was firm and the patient reported that she was experiencing no pain. There were multiple mucosal dehiscences anteriorly and posteriorly, with the exposure of necrotic bone. There appeared to be some deposits of calculus associated with the abutments.

Radiographic examination showed a metal framework spanning the entire edentulous mandible. It sat approximately 2-2.5 mm above the alveolar ridge. Due to the smooth bony border and the even loss across the mandible, this is most likely to be due to continued resorption over time rather than pathological bone loss due to infection. The framework was secured to the bone by four retaining screws: two anteriorly and two posteriorly. The mandible itself was atrophic, with radiolucencies evident around the two anterior retaining screws.

Complete subperiosteal implant placement was first described as a treatment for the atrophic mandible in the 1940s. A mucoperiosteal flap would be raised to allow an impression to be made of the surface of the mandible. CT scans



Figs 1a and 1b Intraoral views. Note dehiscences with bone exposure posteriorly, exposure of a screw in the lower left anterior region and calculus deposits around the posts

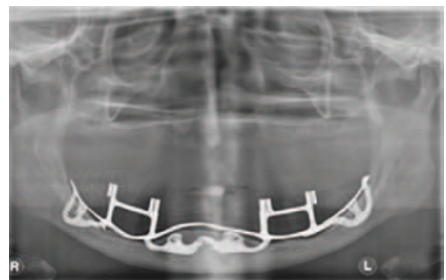


Fig. 2 Radiographic view showing mandibular full arch subperiosteal implant, with anterior and posterior retaining screws. Note radiolucencies adjacent to the anterior screws. The generalised lack of close fit to bony surface is likely related to continued ridge resorption

were also used to allow CAD/CAM fabrication of the framework, negating the need for impressions. The framework usually rests on the mandible, with no penetration into the bone.

Due to the high success rates in atrophic mandibles of osseointegrated implants facilitated by the placement of autogenous grafts, subperiosteal implants are no longer used. However, as this case highlights, there may still be some *in situ* which could present to the general dental practitioner.

H. Beddis, S. Lello, J. Cunliffe, P. Coulthard
Manchester

DOI: 10.1038/sj.bdj.2012.6

SUGAR-COATED DENTISTRY

Sir, I could not stop myself writing in for the first time to express myself about the annual BDTA meeting at Birmingham NEC last year.

I arrived this year with my family – my wife, 8-year-old son and 14-year-old daughter. Within just 30 minutes of our arrival our kids came back with cups full of free candy floss, boxes of chocolates and sweets galore! Most stands seemed to be giving out mints and sweets to entice our attention to buy their products. Please tell me I am getting cynical in my old age (I'm 47) but really, really, should we be endorsing such an image at a dental event such as this? This is a dental event aimed at preventing dental disease ... or have I got it so wrong in the past and should I be giving candy floss out to my patients to promote my practice and ensure that my books are full over this coming recession? Surely with a little imagination and effort stands should promote healthy foods. I look forward next year to more sweets and more fillings!

S. Michaels
Bovingdon

DOI: 10.1038/sj.bdj.2012.7

FURTHER NHS AMAZEMENT

Sir, I write in response to the letter by H. R. Read (*BDJ* 2011; 211: 399) which certainly made me chuckle at a time when I too am frustrated with the state of our NHS.

I graduated in 2007 and after completing my vocational training, decided to go down the secondary care route, working as a senior house officer for three years. The experience was invaluable.

Four months ago, I decided I wanted to tread back into practice: the start of which I didn't expect to be a very stressful few months.

I thought I'd begin with a locum whilst looking for a permanent associate position that took my fancy. Having registered with about five different locum agencies, I was notified I couldn't work immediately without a performer number and having been out of primary care for the last three years, my previous PCT assured me my performer number was no longer active. They went on to tell me that without a job, I couldn't apply for a performer number. So – no performer number, no job. And no job, no performer number. Delightful.

Fortunately, I found a practice that was willing to employ me two and a

half months down the line, thus giving me time to apply for a number. What I did not realise was that two and a half months was insufficient time for the primary care agency to hand me the six digits I needed. Their reasoning was that I hadn't worked in primary care for the last three years and thus, I'd need another CRB check (bear in mind my last one had been no longer than two months previous to that), a couple of references and a Regulations Specialist (whoever that is) would have to review my application. It would then be sent to a performer review group and subsequently, the dental advisor of the region would likely call me in for an interview! All of this for what? For wanting to gain as much experience as I could following graduation so that when I went into practice, I would know how to do things properly and be able to deal with complex cases without having to refer them on? Don't get me wrong, I understand there are vast differences in primary and secondary care which will take time to adapt to but I don't think this problem will be solved by those means!

I was finally included on a list. But alas, three weeks after my initial proposed work start date. This did not come without consequences. Every practice has targets and mine was no exception. Twelve days of patient cancellations is no joke when you already have a UDA shortfall and although they realised the delay was no fault of my own, the contract that had been signed was no longer valid and some of my working days got lost to a dentist who was able to start immediately.

When the new contract was initiated, the DH wanted to improve access. I was volunteering my skills as a dentist and was being told that I was not allowed to work because I didn't have the six digits of a performer number. Is this not a threat to my livelihood? The fact that I have a BDS degree, an MJDF qualification and am well over my necessary CPD hours did not matter.

Surely the number you are given during your VT year (or equivalent) should be yours to keep throughout your career? Admittedly, I'll be glad to see the coming dissolution of the

primary care trusts. Maybe at some point, we can pursue our career goals without having to worry about being jobless as a result of ever increasing bureaucracy.

S. Kaka
Studham

DOI: 10.1038/sj.bdj.2012.8

NOT SO HARD TO SWALLOW

Sir, an advertisement in a recent edition (*BDJ* 211[9]) showed two examples of small unilateral removable partial dentures. There have been case reports of such small dentures being swallowed or inhaled.^{1,2}

If there is an adverse incident, practitioners must justify their treatment planning and decisions regarding the way that treatment is provided.

It is our opinion that the decision to provide a small unilateral partial denture in acrylic resin or any other plastic material would be difficult if not impossible to defend, whether before the General Dental Council or in a court of law.

M. Gregory, R. Jagger
Bristol

1. Hashmi S, Walter J, Smith W, Latis S. Swallowed partial dentures. *J R Soc Med* 2004; **97**: 72-75.
2. Knowles J E. Inhalation of dental plates - a hazard of radiolucent materials. *J Laryngol Otol* 1991; **105**: 681-682.

Managing Director Susan Drake responds on behalf of Sun Dental Laboratories (UK) Ltd: Our technicians are regularly questioned by dentists about the possibility of that problem arising and how this could be alleviated.

The reply from them is quite simple: it is up to the prescribing dentist to prescribe appropriate treatment for each patient; as a dental laboratory we have absolutely no influence on the prescriber's decision and as such only facilitate their prescriptions.

As we are not legal professionals we cannot comment on whether the dentist's decision would be difficult or impossible to defend at the GDC or a court of law.

The advertisement was merely a product offer as a 'temporary' replacement for patients unable to afford an implant and has now been withdrawn from further publication to avoid any confusion.

DOI: 10.1038/sj.bdj.2012.9