Letters to the Editor

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Priority will be given to letters less than 500 words long.
Authors must sign the letter, which may be edited for reasons of space.

THE RISK DOES EXIST

Sir, I read with interest your editor's summary in the recent issue (*BDJ* 2010; **209:** 354-355). You wrote 'I am not aware of large scale or indeed local incidents of illness stemming from dental practices due to DUWLs' and that 'in an evidence-based world some answers would be reassuring'. You correctly highlighted that there may be differences in the hazards arising in DUWLs in dental hospital compared to dental practice. Dental hospitals do differ from smaller dental premises. The former have more complex plumbing systems, served by large water storage tanks with multiple dead legs on the system, which provide suitable habitats for *Legionella* proliferation.[1] Furthermore, it is well recognised that clinical members of the dental team have a greater exposure to contaminated DUWLs and are therefore more likely than patients to demonstrate evidence of disease associated with the DUWL exposure.[2]

HTM 01-05 guidance on managing DUWLs highlights *Legionella* as a marker organism for poor quality water. Legionellosis can take two forms, either Legionnaire's disease, a pneumonia (with a mortality rate of approximately 12%) or a milder flu-like illness Pontiac fever. In the 1990s, before biocidal treatment was introduced, three of the London dental schools reported on legionellae contamination of their DUWLs.[2] Fortunately, exposed staff at the schools were not shown to have significantly raised antibody levels to legionellae.[2] Although one dentist was diagnosed with Legionnaire's disease direct occupational exposure could not be proven. By contrast, in mainland Europe, in hospitals with *Legionella* contaminated DUWLs, dental clinic personnel have exhibited clinically significant *Legionella* antibody levels at concentration normally associated with legionellosis infection in the recent past. However, no clinical cases of Legionnaire's disease were diagnosed but flu-like Pontiac fever might have gone unrecognised. The authors suggested that long term low level exposure might result in protective antibodies against the more pathogenic *L. pneumophila* serogroup. In addition, most of the evaluated dental personnel did not fulfil the known risk criteria for Legionnaire's disease and were thereby less likely to develop disease.[2,3]

If we turn now to data from dental practices in the UK. We undertook a large study with randomised enrolment of 270 dental practices in greater London and Northern Ireland. Legionellae were only isolated from 0.37% of the sampled DUWLs. Unsurprisingly, therefore, the *Legionella* antibody detection rate in these dentists did not exceed the background rate for UK blood donors.[4] Although it should be noted that *Legionella* were recovered more frequently from the recruited dental practices' hot water supply, elimination of legionellae from the hot water was achieved once the practices raised the hot water running temperature to 60°C as recommended in HTM 01-05. Although these results offer some reassurance, it should be remembered that Atlas *et al.*[5] reported on the death of an American GDP from exposure to *Legionella dumoffi* found in his DUWLs. Similar to results described in the editor's summary the majority of the 270 practices surveyed demonstrated a DUWLs bacteria in excess of the permitted count of 100-200 cfu/ml. DUWL bacteria comprise mainly environmental species commonly isolated from drinking waters,[5] but it should not be assumed that these species are necessarily benign. We found that 14% of the surveyed dentists had asthma, a figure considerably higher than the 5% average adult occupational asthma rate. Occupational asthma can be triggered by exposure to aerosolised bacteria and their endotoxins. We found in the subgroup of practitioners who developed asthma since becoming dentists there was a statistically significant association between the development of asthma and exposure to heavily contaminated waterlines in their own practice.[6]

Other bacteria considered to be of clinical significance in DUWLs are pseudomonads and non-tuberculous mycobacterium (NTM). Martin in 1987 reported on the infection of two dental patients with underlying malignancies who developed dental abscesses with the same pseudomonas species isolated from the DUWLs used in their treatment.[7] Serious NTM infections linked to exposure to NTM contaminated DUWLs have also been reported.[8] Therefore I would suggest that the risk from contaminated dental unit waterlines both to vulnerable patients and to the dental team, though small, does exist and should not be ignored.

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APPREHENSION ABOUT THE FUTURE

Sir, I write in response to the many articles written and views expressed about over-regulation of the profession.

I have been in practice for over 35 years. I have always practised to the best of my ability and placed the welfare and interests of my patients first; such are the hallmarks of a profession. My patients appear to be more than happy with the care and treatment they receive and it is indeed a rare occasion that I am ever required to provide out-of-hours emergency treatment.

I have kept informed and up to date both by reading and attending courses, not to comply with any directive from above, but because I have an interest in my job and am keen to learn more about it and how to do it better.

I have enjoyed caring for my patients, many of whom I have come to regard as friends. Many have been with me since I started and we have seen each other's children grow up and have children of their own. Those children now bring their children for their dental care; such is the trust and respect that has developed between us over the years.

When I discovered in 1987 that it was impossible within the NHS for me to practise to the best of my ability, and to do what was best for my patients *and* remain solvent, I converted to private practice.

I have been a member of the BDA since I was a student and a member of Denplan since it was first founded by Stephen Noar and Marilyn Orcharton.

Whilst dentistry is not my life, it is a significant and important part of my life and once upon a time, the thought of ever ceasing practising never entered my head. I always envisaged that I would go on, maybe into my seventies, perhaps working a couple of days a week looking after those patients who have been loyal to me over the years, and passing on the benefits of my experience to my successors. That is until now.

Now, with every week that comes, and every journal that I read, my anxiety level increases and I am filled with apprehension about the future.

The massive escalation in the burden of compliance and legislation is killing any desire to continue practising. The prospect of revalidation, the impending requirements of HTM 01-05 and the Care Quality Commission, amongst so many other regulations which must be incorporated into the day to day running of my practice, have ruined what was once an enjoyable profession.

In my practice, I am supported by two part time dental therapists as well as the practice manager/receptionist (my wife) and two dental nurses.

The exponentially increasing mountain of regulations and certification is a burden which I personally simply cannot carry any longer. And yet there is no indication of any end in sight.

The welfare of the patients has always been the predominant and governing factor within the practice, but now the emphasis has had to shift away completely to making sure we comply and have the correct paperwork! In order to do this, one of my therapists now spends one complete day of each week doing just that - when what she ought to be doing, is treating and caring for patients. This is a complete waste of her training and skills and it is difficult to understand how this will improve the expectations and outcomes of my patients.

The burden of compliance and legislation is not without considerable additional expense which ultimately must be reflected in increased fees, thus making dental care less affordable to more people.

As if it were not already difficult enough for people to find and afford dental care, the government and our own GDC appear hell bent on making it even more difficult.

I have invested heavily in ensuring my practice is clean, modern and up to date and I believe that the standard of care that I offer is second to none. I have taken pride in always being 'ahead of the game' and delivering the very best care and treatment available. I believe that treatment is provided in a clean and safe environment, both for my patients and my staff (who would be quick to tell me otherwise!).

My clinical decisions are based on 35 years' experience, learning and common sense, but that is no longer permissible. They now must be 'evidence-based'!

I hear of dental nurses, reluctant to pay their annual registration fee and refusing to complete their CPD requirements, with every intention of leaving the profession at the end of their five year cycle.

I read that 3,387 dental care professionals have been removed from the GDC register after failing to pay their annual retention fee (*BDJ* 2010; **209:** 155).

Perhaps they simply voted with their feet. What benefits did registration ever bring for them, and furthermore, how will the loss of their valued and essential services benefit the patients?

I feel persecuted, insulted and undervalued by my 'profession'. The only reason I am still practising is my loyalty to my patients, but this is now at breaking point. The relentless drive to regulate and legislate every aspect of my professional life is totally counterproductive.

It appears that much of this new regulation is duplication of existing requirements. It is unnecessary, and there is little or no evidence of its need. I already have a licence to practise through my GDC registration. Why do I require another one?

We are informed that the CQC registration focuses on outcomes, and places the views and experiences of people who use the service at its centre. The truth is that experienced practitioners like myself are on the verge of quitting, because of how we feel and because the burden of regulation that has become too much. Hence the outcome for my patients will be the loss of a service which they have valued and enjoyed for 35 years.

Far from increasing the benefits to patients, the proposals currently in the pipeline have started to harm them by depriving them directly or indirectly of the care they have enjoyed and have a right to continue to expect.

The regulators are perverse to the extreme in believing that the loss of experienced DCPs and practitioners who have given their lives to the profession for so many years is a benefit to patients.

It is time for the profession to unite and reject further interference and regulation, so that we can concentrate our attention on what we are supposed to be doing, ie caring for our patients!

D. Andrew
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STOCK ALERT

Sir, practising dentistry in this age of acronym inflation, clinical governance and endless box-ticking, it is tempting to feel sympathy for colleagues who express doubts as to the extent to which the public are safeguarded by our diligence. Noting, in patient records, the batch numbers and expiry dates of many of the materials and medicaments that we use makes perfect sense. In the event of an adverse outcome or product recall, traceability is essential. In June this year my nurse and I were quite surprised to find a substantial foreign body suspended within an unused cartridge of local anaesthetic which I was about to remove from its packaging to load in to a syringe. Figure 1 clearly shows the black solid, which was loose within the cartridge.

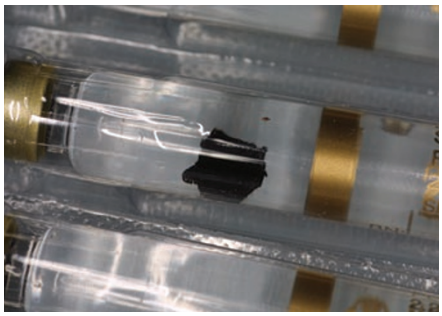

Fig. 1 The black solid in the local anaesthetic cartridge

After contacting the manufacturers, a representative collected the cartridge and indicated that this was an extremely rare occurrence, though she had 'never seen one that big before!' I was reassured that the rest of the batch was safe to use. Through contacting the *BDJ* about a lack of any further response, I have eventually received an apology from the manufacturers as well as a rather technically worded report as to how improvements to quality control mechanisms introduced at the beginning of 2009 should have prevented this from happening, but did not.

While I accept the company's assurance I still remain less than impressed by their response. However, I think it more important to alert colleagues to this unusual circumstance and suggest that they check their stock for: Septanest Articaine 4% with 1:100,000 epinephrine 2.2 ml, Batch 03806, Expiry 2011/05.

S. A. Croston
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FLUORIDE CONTENT

Sir, I was interested to see the recent promotion attached to the *BDJ* (Volume 209 issue 7, 9 October 2010) for Sensodyne Rapid Relief.

I would like to take the opportunity of your letters page to make readers aware that the fluoride content as stated on the packaging for this product is 1,040 ppm F. This is significantly lower than the minimum dosage for adult toothpaste of 1,350 ppm F as recommended by the Department of Health in the evidence-based toolkit *Delivering better oral health*.

I am concerned that a reduction in the fluoride levels combined with a possible delay in seeking dental advice has the potential to exacerbate the situation. This toothpaste should not be recommended on current evidence whatever the cause of the 'sensitivity'.

S. Elworthy
Cranbrook

S. R. Smith, VP, Global Dental Scientific and Professional Communications, R&D, GlaxoSmithKline Consumer Healthcare responds: Sensodyne Rapid Relief provides rapid and long lasting relief from the pain of dentine hypersensitivity. It contains 1,040 ppm fluoride as sodium fluoride. The Cochrane Review confirms that toothpastes containing at least 1,000 ppm of fluoride are effective in preventing dental caries.[1] *Should a dental healthcare professional prefer to recommend a Sensodyne toothpaste with a higher concentration of fluoride they can do so by choosing an appropriate alternative from the Sensodyne range.*

1. *Walsh T, Worthington H V, Glenny A M* et al. *Fluoride toothpastes of different concentrations for preventing dental caries in children and adolescents.* Cochrane Database Syst Rev *2010; (1): CD007868.*

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VISUAL PHENOMENA

Sir, Hughes (*BDJ* 2010; **209:** 57-58) described a rare but recognised ocular complication of inferior dental nerve blocks. Ocular complications including blurred vision, amaurosis (visual loss) which is most commonly transient but can be permanent, loss of accommodation (resulting in blurred near vision), mydriasis, blepharoptosis, diplopia and a Horner's like syndrome (miosis and blepharoptosis) have been reported. In the majority, the effects have been temporary, resolving within 5-45 minutes, but in a few cases permanent sight loss has resulted. Proposed mechanisms include intra-arterial injection, intravenous injection or local diffusion of the anaesthetic with a vasoconstrictive agent.[1-3] Phosphenes is a term used to describe visual sensations such as flashing lights (photopsia) and coloured lights, produced by stimulation of the visual system by something other than light. These visual phenomena can be produced by a variety of stimuli.[4]

The main blood supply to the orbit is via the ophthalmic artery, a branch of the internal carotid artery. The central retinal artery, the first branch of the ophthalmic artery, is a terminal artery, supplying the inner layers of the retina. Interruption to blood flow within the central retinal artery results in phosphenes which can evolve into transient or permanent visual loss. The lateral rectus muscle receives its blood supply from both the lacrimal artery and the lateral muscular artery, both branches of the ophthalmic artery. The lateral rectus is the only recti muscle to receive part of its blood supply from the lacrimal artery. The ophthalmic artery (internal carotid circulation) anastamoses with the external carotid circulation. Retrograde flow from the external carotid circulation into the orbit has been demonstrated.[5] If during the nerve block the anaesthetic with a vasoconstrictive agent is inadvertently injected into the inferior alveolar artery, it can, by retrograde flow, enter the middle meningeal artery (external carotid circulation) and then, via anastomoses, flow into the ophthalmic artery. In some patients this is more likely as the ophthalmic artery arises, not from the internal carotid artery but directly from the middle meningeal artery (external carotid circulation) and in others, although the ophthalmic artery arises from the internal carotid artery, the middle meningeal artery makes the major contribution to flow. The lacrimal artery, a branch of the ophthalmic artery, which supplies the lateral rectus muscle, also has an anastomoses with the middle menigeal artery. Again, in some patients, like the ophthalmic artery, the lacrimal artery arises directly from the middle meningeal artery.[6] So in a small number of patients the orbital blood supply is not from the internal carotid circulation but from the external carotid circulation.

The patient's symptoms could be explained by inadvertent intra-arterial injection of an anaesthetic with a vasoconstrictive agent causing vasospasm, which when combined with rare arterial anatomical variations (orbital blood supplied predominately from the external carotid circulation) may result in transient ischaemia of the lateral rectus muscle, via the lacrimal artery, causing diplopia and transient ischaemia of the retina, via the central retinal artery, resulting in phosphenes or amaurosis.

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S. Crone,
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MUSCULOSKELETAL STRAINS

Sir, as a dentist of 20 years who now works as an osteopath in sports injuries, I have plenty of experience of the strains which clinical dentistry can put on the musculoskeletal system.

I therefore read with great interest the articles by Brown *et al.*[1] and Hill *et al.*[2] on the subject of dental practitioners and ill-health retirement and commend them for their work in this area of great importance.

That there is a high degree of work-related pain in dentistry is beyond question. What is less clear from the literature is where the solutions may be found.

A 1940s study by Biller[3] showed that 65% of dentists complained of back pain. Despite all the improvements in seating, equipment and working practices, that figure has not improved as noted in a recent systematic review.[4]

Besides many other skills, working as a dentist requires a combination of strength, endurance, flexibility and co-ordination. In other words, you need to be truly 'fit' to practise dentistry.

Lessons could be learned from the world of sports injuries, where problems such as shoulder pain in swimmers and back pain in cricketers have parallels in the practise of dentistry, with correct muscle balance being a key objective.

I feel it is clear that prevention is the key, and that a strong emphasis on physical conditioning and 'care of self' should begin in the first year of dental training.

If problems do arise during a dentist's career, there is evidence[5] that therapies such as osteopathy can make a difference, and keep dentists in work.

G. Gallacher
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