A question of being safe or sorry

David Hands and Neil Photay discuss nickel restorations and metal allergies

It is estimated that one in every three people in the UK will suffer from some kind of allergy in their lifetime and this has inevitable consequences for health care professionals who know they must take any relevant history of allergy into consideration before embarking on a treatment plan. From latex allergy to an allergy to the ingredients in sedatives, dental professionals must be constantly aware of how to spot, and treat, allergic reactions. One often unconsidered problem is an allergy to nickel, which can be a problem for people with fillings and restorations. Whilst the dangers of mercury in amalgam fillings has been making news for years, nickel has been somewhat overlooked, but the potential for allergic reaction should not be underestimated by patient or dentist.

Solid understanding

In the dental field, a solid understanding of allergies will allow the dentist to treat patients suffering from metal allergies and to select appropriate restorative materials for them. With approximately 10 per cent of women and six per cent of men thought to suffer from the condition, metal allergies are a growing concern, and can represent a small but significant proportion of the practitioner's patient base.

So how do we know if a patient has a metal allergy? The short answer, unfortunately, is that we don’t. Medical records will sometimes provide details of previous allergic reactions and some patients may even have had a patch test to confirm this, but many people are unaware that they have an allergy to nickel at all. Sensitivity to jewellery that contains nickel is not necessarily a precursor to an intra-oral reaction as research has shown that people with a positive skin reaction to nickel are not necessarily allergic to nickel containing alloys intra-orally, and vice-versa. Indeed, sensitivity to a nickel-containing alloy may well be due to its iridium and indium content instead, which all share similar chemical properties. However, many patients with a nickel allergy also have...
an intolerance to gold; so as a general rule of thumb, if a patient has a known history of a nickel or gold allergy or intolerance, metal restorations should be avoided altogether. Dentists should also be aware of the symptoms of an intra-oral metal allergy, which usually include local irritations and inflammation of the mucous tissue of the mouth, predominantly in the form of gingivitis and stomatitis. In extreme cases patients can present with discoloration of the gums and some deterioration of the gingiva.

Other metals
Along with iridium, palladium can also cause sensitivity in patients with nickel allergies. It is estimated that between 54 and 65.5 per cent of patients with nickel allergies also suffer reactions to palladium, and bonding alloys containing this should also be avoided if a history of nickel allergies is known.

Thankfully, with many all-ceramic restorations available both privately and on the NHS, patients at risk of an allergic reaction now have a range of safe solutions from which to choose. Composite inlays are a particularly affordable option and also boast superior aesthetic benefits to their metal counterparts. If all-ceramic restorations on posterior teeth are not viable due to their strength, biocompatible alloys such as cobalt-chrome are also a safe option.

Err on the side of caution
When it comes to the health of patients, it is always best to err on the side of caution and so, if any intolerance to alloys is suspected, the best option is to choose all-ceramic materials. Many patients will be pleased to be offered the more aesthetically pleasing option, and few will disagree that it is better to be safe than sorry.

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About the author

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BSc (Hons) GDC Reg. Technician Neil proudly carries his family tradition of working in the dental industry and creating and manufacturing dental innovations and technologies. Working at both the CosTech Laboratory and family dental surgeries from the age of 16, Neil completed a BSc(hons) in Computer Sciences, specialising in project and team management at Brunel University before returning to the Costech Elite laboratory in 2003.

David Hands
MDT GDC Reg. Technician David studied Dental Technology at Lambeth College in 1999 achieving BTech national diploma in science and dental technology, and advance HNC/ HND in dental technology. He further trained with Master Technicians in the USA in ‘Advanced Aesthetics’ and ‘Smile Design’, gaining the Master Technician status. David joined CosTech in 2004 and quickly became head ceramist.

Neil and David began joint management on CosTech Elite in 2008, developing the advanced team structure and skills and forging strong relationships with all the CosTech customers.

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