Effects of bruxism

If ever there was an appropriate time for raising awareness of bruxism, the parafunctional grinding and clenching of teeth, and the problems it causes, this could be it.

As a dentist with a special interest in migraine and pain management, Pav Khaira of the Migraine Care Institute says the condition is becoming increasingly common as the economic crisis takes its toll on the nation’s health.

“I think bruxism is definitely becoming more common,” says Pav. “The symptoms and fallout of bruxism that we see are more common too, such as frequent headaches and migraines, and increased facial pains.”

Many of the new patients presenting with these issues may have always suffered from bruxism to some extent, but found that their symptoms are increasing as their stress levels rise along with debt or job security worries.

“For my point of view stress is a modifier to bruxism, not a driving force,” adds Pav. “And it is a complex subject that highlights biodiversity. It's like a threshold. For some people, as their stress drops below the threshold, their symptoms will resolve. But other people always seem to be above their threshold, even if their stress levels are low.”

For many patients, arrival in a migraine and pain management practice might follow months or years of shuttling between different medical practitioners in search of help. A lack of knowledge about bruxism throughout the medical education system is to blame for that, suggests Pav. “It’s not about a lack of empathy, it’s about a lack of knowledge,” he adds.

In general practice there can be gaps in knowledge about bruxism, or where to send sufferers, according to Pav. “If I see somebody who has really crooked teeth, I send them to my orthodontist. If I’ve got somebody with raging toothache and I can’t do the root treatment I send them to my endodontist. Where do you send patients who’ve got these types of problems? There is no set speciality,” he says. “I’m not one of those people who say you can cure bruxism. But you can manage it; you can manage the signs and the symptoms, and often you can get the patient completely comfortable. There are some patients who are absolute monster clenchers and grinders, and somebody has to help them. You can’t just leave them.”

As well as substantially improving quality of life for patients, successful management of bruxism can also save them from future dental problems that might necessitate invasive and expensive treatment. “Bruxism can cause extensive damage in the long term,” says Pav.

To treat the condition effectively and efficiently, practitioners must take the time to make the fullest diagnosis possible, Pav believes: “We do a very in-depth history, a very in-depth analysis. I talk to the patient about whether they have ever had jaw popping and clicking, locking jaw joints, any sinus pain, any ear pain, any joint pains elsewhere. I also do a full muscular examination, a full ligament insertion examination.”

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ferring from between 15 and 18 migraines a month. After treatment both patients were happy, even though the frequency at which they suffered the migraines had remained constant. The improvement had been in the duration of the migraines; instead of suffering for up to two days each time, the migraines were lasting for an hour and could, literally, be slept off.

To treat bruxism effectively, practitioners must be open-minded about issues such as occlusion, says Pav. “The fact is that occlusion is not the driving factor in a lot of these issues. It can sometimes be a modifying factor but it is not a driving factor. That is not to say that doing something occlusally will not give pain relief, but it is still not the driving factor,” he insists.

“What a lot of dentists say is that, if your teeth do not fit perfectly where your jaw joints and muscles harmoniously want to contract, your muscles will fight to find a comfortable position. The theory is that if you remove these interferences from your bite, you let the patient close their mouth correctly and their problems go away. My take on this is actually the other way around: if you suffer from bruxism you are going to clench and grind your teeth, no matter what. And there is strong, scientific evidence to support this. Sometimes your teeth will get in the way, which will exacerbate the pain. Sometimes by harmonising the bite you can get resolution of these symptoms, but that doesn’t make it the driving factor.”

Pav’s treatment model assumes that patients are suffering a neurological phenomenon, rather than an anatomical one. He achieves considerable success in treating patients with the NTI-tss occlusal splint. This small device fits over the front teeth, and reduces muscle tension intensity by about 75 per cent when patients try to clench in their sleep. It prevents the posterior teeth from occluding and reduces the amount of pressure that can be applied while clenching.

“The other thing is that when your teeth touch you get a neurological impulse to your brain telling you they are touching. Because with the NTI-tss the teeth at the back of the mouth are not touching, the amount of sensory overload going back to the brain significantly reduces, and that is how it helps reduce migraine, by reducing excessive nociceptive input to the sphenopalatine ganglion” he says.

By preventing the posterior teeth from occluding, the NTI-tss essentially achieves the same function as removing interferences at the back of the mouth, which according to conventional wisdom should prevent clenching and grinding. “When you fit an NTI-tss you have no interferences at the back of the mouth, so if the argument is correct the drive for clenching and grinding your teeth should have disappeared. So how do I explain the scratches that appear on almost 100 per cent of the NTI-tss devices that I fit over time? The bite is not the driving factor.”

“People need to realise that NTI-tss is part of a philosophy. The device itself is the easiest way to deliver that philosophy, but it is not the only way to do it,” says Pav. While some dentists fear, incorrectly, that the device can overload the jaw joint, Pav says that a success rate of over 90 per cent means that patients like the NTI-tss a great deal.