Over the counter medicine

Diclofenac caution

Sir, Diclofenac is a non-steroidal anti-inflammatory drug (NSAID) with analgesic, anti-inflammatory and antipyretic properties commonly used in low, middle and high-income countries and is available over the counter in most.^{1,2}

It is prescribed for third molar surgery, tooth extraction, root canal treatment, deep cavity preparation and acute dental pain.^{1,3,4}

Bally *et al.*⁵ observed that patients taking any dose of NSAIDs for periods of one week or more had increased risk of myocardial infarction.

Use of diclofenac for one to seven days increased the probability of this risk by 99% with greater risks for higher doses and in the first month of use.

Arfe *et al.*⁶ also observed that diclofenac was associated with increased risk of hospital admission for heart failure, the risk being doubled when used at very high doses (≥ 2 defined daily dose equivalents).

Schmidt *et al.* observed that within a 30-day period of initiation, patients taking diclofenac were exposed to cardiovascular health risks such as atrial fibrillation or flutter, ischaemic stroke, heart failure, myocardial infarction, and cardiac death, when compared to non-use, paracetamol use, and use of other traditional NSAIDs.²

In view of the cardiovascular risks thus identified, diclofenac should be available only on prescription and with adequate written warning but not prescribed for patients with previous myocardial infarction, heart failure and diabetes mellitus.

Vagish Kumar L S, Mangaluru, India, by email

References

- Orozco-Solis M, García-Ávalos Y, Pichardo-Ramírez C, Tobías-Azúa F, Zapata-Morales J R, Aragon-Martínez O H, and Isordia-Espinoza M A. Single dose of diclofenac or meloxicam for control of pain, facial swelling, and trismus in oral surgery. *Med Oral Patol Oral Cir Bucal* 2016; **21**: e127–e134.
- Schmidt M, Sørensen H T, Pedersen L. Diclofenac use and cardiovascular risks: series of nationwide cohort studies. *BMJ* 2018; **362**: k3426
- Gazal G, Al-Samadani K H. Comparison of paracetamol, ibuprofen, and diclofenac potassium for pain relief following dental extractions and deep cavity preparations. *Saudi Med J* 2017; **38**: 284–291
- Makkar S, Kaler N, Dhawan R, Mann N, Pasricha S. Efficacy of ibuprofen and paracetamol and diclofenac sodium and paracetamol combination on postoperative pain following root canal preparation in a randomized placebo-controlled study. *Ind J Oral Sci* 2012; **3**: 19–23.

- Bally M, Dendukuri N, Rich B. Risk of acute myocardial infarction with NSAIDs in real world use: Bayesian meta-analysis of individual patient data. *BMJ* 2017; **357**: j1909
- Arfe A, Scotti L, Varas-Lorenzo C *et al.* Non-steroidal anti-inflammatory drugs and risk of heart failure in four European countries: nested case-control study. *BMJ* 2016; **354**: i4857.

DOI: 10.1038/s41415-019-0286-7

Stress

Burn out solutions needed

Sir, we have read with much interest the article on stress and burnout in UK general dental practitioners in your journal.¹

It is well known that dentistry is a very stressful profession and for us, dental general practitioners (GDPs) from Peru, we totally agree and support the findings of this paper. However, it would be enriching to read possible solutions or suggestions for dealing with stress and burnout.

Recently there have not been many articles about the causes of stress and its relationship with burnout for general dentist practitioners. There is some previous research as this has been an issue for some time. In 1995, it was documented that stress includes a series of signs and symptoms, and that for general dentists, is associated with early retirement and increased risk of suicide.

Over the past 24 years, many papers have been written about this topic. As GDPs we are interested not only in the causes or subdimensions of stress (patient-led, productivity, work content and regulatory stress) the degree of burnout and how it increases with age and experience, but also in the solutions or methods that may help to reduce this problem.^{2,3,4}

There are no recent articles addressing ways to reduce the stress and burnout. Today there is a need for studies that show a possibility of primary solutions to this issue.

In one study that offered primary interventions to deal with dental practitioners' stress, there was no control group and a small sample size. To date there has not been a well-structured study that addresses this problem.⁵

A. C. Z. Mattos and L. A. A. Tirado, Trujillo and Chimbote, Peru, by email

References

- Toon M, Collin V, Whitehead P, Reynolds L. An analysis of stress and burnout in UK general dental

practitioners: subdimensions and causes. *Br Dent J* 2019; **226**: 125–130.

- Freeman R, Main J R R, Burke F J T. Occupational stress and dentistry: Theory and practice. Part I Recognition. *Br Dent J* 1995; **178**: 214–217.
- Langade D, Modi P D, Sidhwa Y F, *et al.* Burnout Syndrome Among Medical Practitioners Across India: A Questionnaire-Based Survey. *Cureus* 2016; **8**: 771–782.
- Jugale P V, Mallaiah P, Krishnamurthy A, Sangha R. Burnout and Work Engagement Among Dental Practitioners in Bangalore City: A Cross-Sectional Study. *J Clin Diagn Res*. 2016; **10**: 63–67.
- Newton J T, Allen C D, Coates J, Turner A, Prior J. How to reduce the stress of general dental practice: the need for research into the effectiveness of multifaceted interventions. *Br Dent J* 2006; **200**: 437–440.

DOI: 10.1038/s41415-019-0288-5

Inferior alveolar nerve blocks

Why take the risk?

Sir, we read with interest the mini systematic review of articaine compared to lidocaine in relation to nerve damage for inferior alveolar nerve blocks (IANB).¹

The paper provides a review of some of the literature regarding 4% articaine with 1:100,000 adrenaline and, as the authors' state, there remains controversy within the evidence base regarding whether there is an increased risk of nerve damage with use of articaine.

However, an important point to be considered is that although the literature clearly demonstrates that 4% articaine 1:100,000 adrenaline is superior to 2% lidocaine 1:80,000 adrenaline for infiltration anaesthesia, this is not the case for IANB,^{2,3} the two solutions being equally effective.

Therefore, as there is no benefit in using articaine over lidocaine for IANB, then the potential risk of nerve damage, however small, should lead to the conclusion 'why take the risk?'

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References

- Stirrup P, Crean S. Does articaine, rather than lidocaine, increase the risk of nerve damage when administered for inferior alveolar nerve blocks in patients undergoing local anaesthesia for dental treatment? A mini systematic review of the literature. *Br Dent J* 2019; **226**: 213–223.
- Kung J, McDonagh M, Sedgley C M. Does Articaine Provide an Advantage over Lidocaine in Patients with Symptomatic Irreversible Pulpitis? A Systematic Review and Meta-analysis. *J Endod* 2015; **41**: 1784–1794.
- Mikesell P, Nusstein J, Reader A, Beck M, Weaver J. A comparison of articaine and lidocaine for inferior alveolar nerve blocks. *J Endod* 2005; **31**: 265–270.

DOI: 10.1038/s41415-019-0287-6