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MEDIA RELEASE

HOPE ON THE HORIZON FOR MIGRAINE SUFFERERS

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RECENT insights into migraine pathophysiology, new drug treatments and the possibility of device therapy are providing a beacon of hope to migraine sufferers in Australia, according to the authors of a review published in the *Medical Journal of Australia*.

“Migraine affects over a billion people worldwide in any year and is the second most common cause of years lost due to disability,” wrote the authors, Dr Michael Eller, from Monash Medical Centre in Melbourne, and Professor Peter Goadsby from the University of California, San Francisco’s Headache Center.

“Understanding of migraine pathophysiology has progressed significantly,” they wrote. “Animal models and functional neuroimaging have yielded significant insight into brain structures that mediate migraine symptoms.

“The role of small peptides as neurotransmitters within this network has been elucidated, allowing the generation of novel therapeutic approaches that have been validated by randomised placebo-controlled trials.”

Calcitonin gene-related peptide (CGRP) is found at higher levels in the jugular vein of people with migraine than when they are pain-free, the authors explained.

“Three monoclonal antibodies against CGRP, ligand-directed, and one against the canonical CGRP receptor CLR/RAMP-1 have been developed,” Eller and Goadsby wrote.

“Efficacy among these drugs in episodic and chronic migraine are comparable, while advantages over older drugs include favourable side effect profile, lack of drug interactions and contraindications.”

The first of this class of drugs – erenumab – is approved for use in Australia. “In one study of episodic migraineurs, migraine days were reduced from 8.3 by 3.7 days in the 140 mg group and by 1.8 days for placebo when comparing months 4–6 to the lead-in month. A □ 50% reduction in the mean number of migraine days per month was found in 50% of patients in the 140 mg group compared with 27% in the placebo group.”

The authors wrote that migraine-specific medications are making their way “from bench to bedside”.

“These include small molecule CGRP receptor antagonists, serotonin 1F receptor agonists, glutamate and orexin receptor antagonists, and molecules that work on acid-sensing ion channel type 1. Monoclonal antibodies against the pituitary adenylate cyclase-activating peptide ligand and receptor, a peptide neurotransmitter that can be co-localised with CGRP (with which it shares some characteristics) is undergoing phase 2 trials.”

A supraorbital transcutaneous stimulator, an extrinsic hand-held vagal nerve stimulator, and a handheld single-pulse transcranial stimulator are among devices being used with “modest” evidence bases.

“An increasingly granular understanding of migraine symptoms and their pathophysiological underpinnings has led to the development of medications specifically designed to treat the condition,” Eller and Goadsby concluded.

“Patients with migraine can achieve a significant improvement in their quality of life by understanding their condition and how best to manage it. Doctors play a pivotal role in facilitating this outcome.”

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