PRESS RELEASE

Is your migraine preventive treatment balanced between drugs’ benefits and harms?

Review finds little difference between effectiveness of drugs routinely prescribed for migraine prevention but evident difference in the side-effects experienced

Migraine headaches are a major cause of ill health and a reduced quality of life. Some individuals suffer from a frequent and severe migraine problem which means that they require regular medication to try and prevent them. A new review¹ of the medications, which may help to prevent episodic migraines, appears in the *Journal of General Internal Medicine*, published by Springer. The authors, Tatyana Shamliyan from the University of Minnesota School of Public Health, and her colleagues, compare published research on the drugs available to find those which offer the best migraine prevention coupled with the fewest adverse side-effects.

Preventive treatments for migraines aim to reduce the number of migraines suffered by fifty percent. There are a number of different drugs commonly used, all of which may cause some side effects. The researchers carried out a review of studies which tested how well the different types of drugs worked and also their acceptability in terms of adverse effects suffered. The studies used enrolled mostly middle aged women with episodic migraine who suffered an average of five monthly migraine attacks.

The authors found that all approved drugs used in the reviewed trials worked better than placebo in reducing monthly migraine attacks. They all demonstrated similar effects in that they prevented half or more migraines in 200 to 400 patients per 1000 treated. Off-label anti-epileptics and anti-depressants appeared to cause the most bothersome side effects which usually resulted in the medication being stopped. Off-label beta-blockers and angiotensin-inhibiting drugs caused the fewest side-effects. (Off-label drugs are drugs which have not been approved by the Food and Drug Administration for a specific condition).

The American Academy of Neurology and the American Headache Society currently recommend two types of anti-epileptic drug and two beta-blockers for adult migraine prevention. These guidelines do not consider the balance between the effectiveness and harms of the drugs they recommend. As well as the increased occasion of immediate side effects with anti-epileptics, there is also evidence from other studies that with long-term use they can cause sexual problems such as impotence which would also deter long-term adherence.

Shamliyan and her colleagues suggest that future studies should examine the effects of the approved as well as the off-label drugs, taking into consideration patient demographics, family history of migraine, other illnesses and response to prior treatments. They also suggest that vigilance should be increased to monitor any adverse effects of current migraine-preventing drugs. Only once the necessary evidence is available, will migraine sufferers be given the best possible hope of a better quality of life with a preventive treatment that is more pro than con.

References
2. The *Journal of General Internal Medicine* is the official journal of the Society of General Internal Medicine.

The full-text article is available to journalists on request.
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