Preventive drug treatments for adults with chronic migraine: a systematic review with economic modelling

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Plain language summary

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What is the problem?

Chronic migraine is a disabling condition that can destroy work and family life. Treatments include cheap tablets (e.g. amitriptyline, propranolol and topiramate), Botox and expensive new drugs (the calcitonin gene-related peptide monoclonal antibodies). It is not known which of these drugs is the best choice.

What did we want to find out?

We wanted to find out which of these drugs works best. We wanted to know if they reduced the number of headache/migraine days and improved headache-related quality of life, how many side effects people experienced, and if they provided good value for the National Health Service.

How did we do this?

We first looked for research comparing these drugs to placebo (fake) drugs, and to each other. We then worked out which provide best value for money.

What did we find out?

Calcitonin gene-related peptide monoclonal antibodies reduced headache/migraine days by 2.0–2.5 days per month; Botox reduced headache/migraine days per month by around 1.9; and topiramate reduced headache/migraine days by 1.1–1.5 days per month. Many people taking topiramate or amitriptyline have nervous system and/or stomach/bowel side effects. Some people using calcitonin gene-related peptide monoclonal antibodies reported side effects associated with injections. Some calcitonin gene-related peptide monoclonal antibodies and Botox provide worthwhile benefits on headache-related quality of life. We were not able to identify any studies of sufficient quality to assess the effectiveness of other oral drugs.

The best value drug was topiramate which gave better health outcomes at a lower cost than the placebos.

What does this mean?

After sharing the results with a panel of people with chronic migraine and headache experts, we identified a need for new studies comparing commonly used cheap oral drugs with placebo, Botox and calcitonin gene-related peptide monoclonal antibodies.

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This article

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