Cheap medicines found to prevent migraine as effectively as expensive ones

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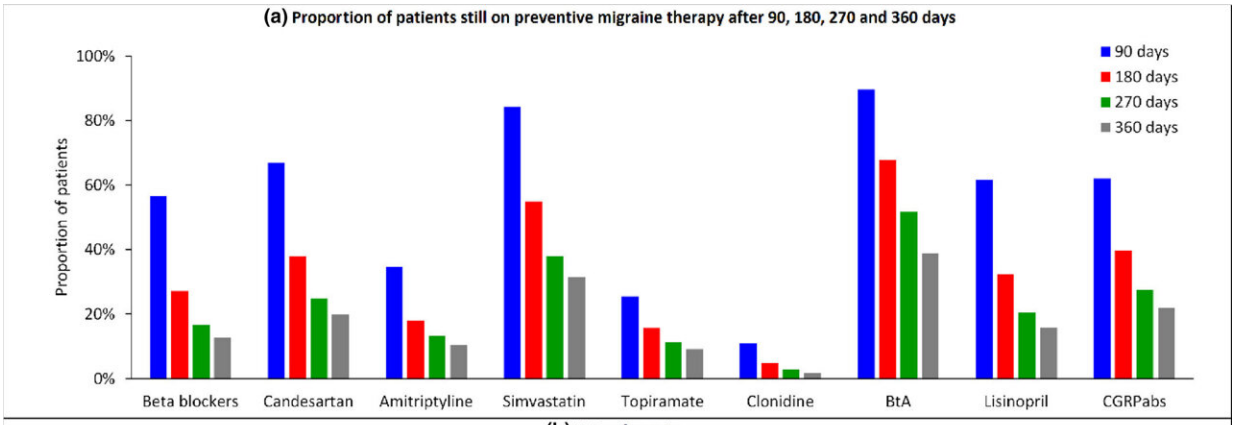

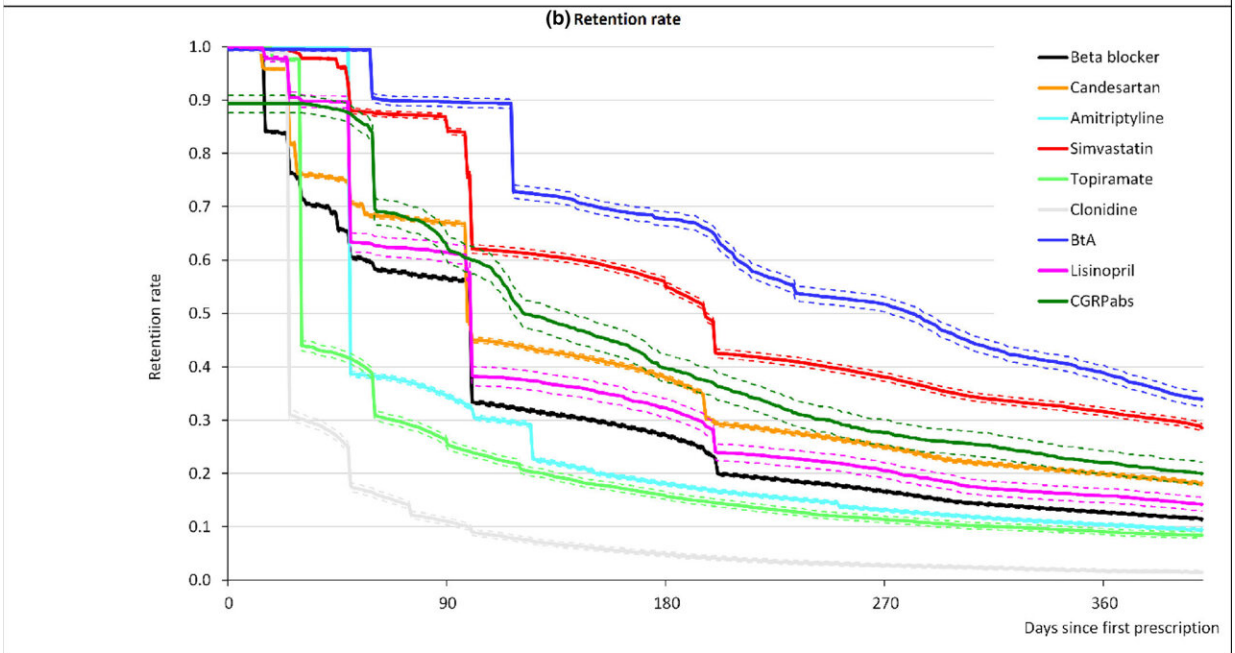

(c) Number of patients at risk at 0, 90, 180, 270 and 360 days

	0 days	90 days	180 days	270 days	360 days
Beta blockers	51,385	29,066	13,920	8,520	6,511
Candesartan	35,736	23,945	13,589	8,926	7,114
Amitriptyline	34,504	11,988	6,220	4,503	3,569
Simvastatin	14,298	12,424	8,007	5,424	4,494
Topiramate	9,586	2,531	1,518	1,095	876
Clonidine	8,584	936	410	236	147
BtA	4,867	4,363	3,297	2,516	1,897
Lisinopril	2,903	1,791	941	596	460
CGRPabs	1,402	885	557	388	308

Duration of migraine preventive treatment by drug group. (a) Proportion of patients still on preventive migraine therapy after 90, 180, 270, and 360 days and proportion of patients still on each drug since first prescription (retention rate). (b) Retention rate with 95% confidence intervals (dotted lines) adjusted for patient characteristics, comorbidities, year of treatment start, previous use of migraine preventive drugs, and amount of triptan defined daily doses (DDDs) prescribed per month (above or below 16 DDDs/30 days in baseline period. BtA, botulinum toxin A; CGRPabs, calcitonin gene-related peptide pathway antibodies. (c) Number of patients at risk at 0, 90, 180, 270 and 360 days from (b). Credit: *European Journal of Neurology* (2023). DOI: 10.1111/ene.16062

Migraine is more than just a headache. Often the pain is accompanied by nausea, vomiting, light sensitivity, and sound sensitivity. Chronic migraine can be disabling and may prevent many, especially women, from contributing to working life.

Still, it often takes a long time for migraine patients to find a treatment that works well for them. Researchers at the Norwegian Center for Headache Research (NorHead) have used data from the Norwegian Prescription Register to look at which medicines best prevent migraine in people in Norway:

"There has now been done a lot of research on this subject before. This may weaken the quality of the treatment and increase the cost of treatment for this patient group," says the leader of the study, Professor Marte-Helen Bjørk at the Department of Clinical Medicine, University of Bergen.

Three medicines had better effect than the first choice

of medicines

The researchers used national register data from 2010 to 2020 to estimate the treatment effect. They measured this by looking at the consumption of acute migraine medicines before and after starting preventive treatment, and investigated how long the people with migraine used the different preventive treatments. A total of over one hundred thousand migraine patients were in the study.

"When the withdrawal of acute migraine medicines changed little after starting preventive medicines, or people stopped quickly on the preventive medicines, the preventive medicine was interpreted as having little effect. If the preventive medicine was used on long, uninterrupted periods, and we saw a decrease in the consumption of acute medicines, we interpreted the preventive medicine as having a good effect," Bjørk explains.

As a rule, so-called beta blockers are used as the first choice to prevent migraine attacks, but the researchers found that three medicines especially had a better preventive effect: CGRP inhibitors, amitriptyline and simvastatin.

"The latter two medicines are also established medicines used for depression, chronic pain and high cholesterol, respectively, while CGRP inhibitors are developed and used specifically for chronic migraine," says the professor.

Can have great significance for the cost of health care

CGRP inhibitors are more expensive than the other medicines. In 2021 their reimbursement amounted to 500 million NOK (not including discounts given by pharma companies).

"Our analysis shows that some established and cheaper medicines can have a similar treatment effect as the more expensive ones. This may be of great significance both for the patient group and Norwegian health care" says Bjørk.

The researchers at NorHead have already started work on a large clinical study to measure the effect of established cholesterol-lowering medicines as a preventive measure against chronic and episodic migraine.

More information: Marte H. Bjørk et al, Comparative retention and effectiveness of migraine preventive treatments: A nationwide registry-based cohort study, *European Journal of Neurology* (2023). DOI: 10.1111/ene.16062

Provided by University of Bergen