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Study: 'Googling' may trigger statin intolerance

According to researchers, countries where patients using Google are more likely to find websites about statin side effects have greater levels of statin intolerance. The "nocebo effect" driven by online information may be contributing to statin intolerance, says a new study published in International Journal of Cardiology.

For patients with dyslipidaemia, statins are widely known to be beneficial for both primary and secondary prevention of major vascular events, including myocardial infarction, ischaemic stroke and cardiovascular mortality. Most patients tolerate these medications well, and in randomised controlled trials their adverse effect profile is noted to be minimal and not significantly worse than placebo. However, in observational studies, greater numbers of patients experience statin-associated adverse effects.

A psychological phenomenon, known as the nocebo effect, is thought to explain the conflicting data on the prevalence of adverse effects between blinded randomised trials and non-blinded observational studies. The nocebo effect, which is the opposite of the placebo effect, occurs when individuals with a preconceived negative expectation for an intervention report harm at a higher rate than anticipated. Information that patients read on the internet may contribute to the nocebo effect for statins.

The prevalence of statin intolerance in 13 countries across five continents was established in a recent study (Hovingh et al.); prevalence was ascertained via a web-based survey of 810 primary care physicians and specialists, who were asked what proportion of their patients were intolerant to statins.

In the present study, researchers examined whether the number of websites about statin side effects found using Google is associated with the prevalence of statin intolerance in those 13 countries. Using the Google search engine for each country, the number of websites about statin side effects was determined, and standardised to the number of websites about statins overall. Searches were restricted to pages in the native language, and were conducted after connecting to each country using a virtual private network (VPN).

Researchers found that English-speaking countries (Australia, Canada, UK, USA) had the highest prevalence of statin intolerance and also had the largest standardised number of websites about statin side effects. The sample Pearson correlation coefficient between these two variables was 0.868.

"Our results suggest that statin-associated adverse effects were not emphasised as much in websites in other languages, and therefore since patients were less likely to read about them, they were less likely to become intolerant to statins," the researchers explain. "The majority of statin-intolerant patients complain of muscle symptoms, which are common and generally subjective, and are therefore particularly susceptible to the nocebo effect."

The media are known to influence the perception of adverse effects, according to the researchers. For example, television coverage of a health scare in New Zealand triggered by a formulation change for Eltroxin (levothyroxine) resulted in a marked increase in adverse event reporting for this drug, with larger increases for the specific symptoms that were reported in the news stories.

"Clinicians should try to minimise the nocebo effect; an optimistic and empathetic communication style can reduce the effect of negative patient expectations," the researchers say. "Patients should be reminded that muscle symptoms are common in middle-aged and older adults, whether or not they are taking statins, and that the benefits of statins outweigh potential risks."

Source: International Journal of Cardiology
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