MedicalXpress

Changing treatment can help MS patients, study finds

November 7 2022

Credit: Unsplash/CC0 Public Domain

Monash University researchers have used the world's largest multiple sclerosis (MS) registry, MSBase, to provide evidence that will help those with MS take the best medicine for them.

People with MS often need to switch drugs to fully control their disease. These switch decisions are complex because until now there has been no good evidence to choose one new drug over another.

Led by researchers from the MS Clinical Neuroimmunology group in the Department of Neuroscience at Monash University, the study created this much-needed evidence. It determined disease outcomes for three common drugs that people switch to after stopping the popular MS drug fingolimod due to disease breakthrough or side effects. The results will enable people with MS and their care teams to make evidence-based decisions about medication.

MS is a complex condition of the central nervous system, interfering with nerve impulses within the brain, spinal cord and optic nerves. It affects more than 25,600 people in Australia. Although treatments have improved significantly, researchers are yet to uncover its cause or discover a cure. Most patients will require lifelong treatment to minimize the disease's progression.

Published in the *Journal of Neurology, Neurosurgery and Psychiatry*, the study revealed that the number of relapses in patients with the most common form of MS (relapsing-remitting) were well controlled and disability stabilized or improved when those who discontinued fingolimod changed to either ocrelizumab or natalizumab.

Relapsing-remitting MS is the most common form in which new symptoms (relapses) occur over at least 24 hours and get worse. They are then followed by a period of remission (remitting) when the symptoms partially or fully go away.

Fingolimod is approved as a first-line MS therapy in Australia, the U.S., Canada and other countries. But after a few years of treatment many patients stop taking it because of adverse side effects, further relapses,

or disease progression. These patients often then experience severe relapses that cause further disability, affecting their everyday quality of living.

Senior author Professor Helmut Butzkueven, Head of the Department of Neurology at Alfred Health, and Managing Director of the MSBase foundation, headquartered at Monash University, said current practice after stopping fingolimod was not guided by evidence, a gap this paper filled.

Professor Butzkueven said the findings were great news for patients who need to stop taking fingolimod. "Specialists are not sure what is the optimal treatment to provide patients with MS when they need to discontinue fingolimod," he said. "Now, we can use the knowledge from our study to inform their practice and help patients receive the most benefit in terms of their disease."

Professor Butzkueven said the findings were particularly exciting as previous studies had not directly looked at the effectiveness of these three drugs following discontinuation of fingolimod, only how well each drug works against placebo. "Our study provides a more comprehensive picture that is valuable to specialists and people with MS for managing their condition," he said. "It's great research because I could apply it in our busy MS clinic the day we got the results."

First author and biostatistician Dr. Chao Zhu applied a sophisticated statistical approach to the analysis that allowed the team to arrive at its findings.

Ocrelizumab performed best in reducing the annualized relapse rate, followed by natalizumab and cladribine. Natalizumab was found to have the most improvement in disability, and patients persisted longest on ocrelizumab.

The next stage of the research is to assess the safety of the three drugs compared with fingolimod. This is a key part of understanding the overall clinical benefit and will add more evidence for specialists to guide patients' treatments.

The MSBase Foundation, hosted in Monash University's Department of Neuroscience in Melbourne, allows more than 900 clinicians globally to monitor outcomes for people with MS. Its data has been used in more than 90 publications improving care for people with MS in the last 9 years.

More information: Chao Zhu et al, Comparing switch to ocrelizumab, cladribine or natalizumab after fingolimod treatment cessation in multiple sclerosis, *Journal of Neurology, Neurosurgery & Psychiatry* (2022). DOI: 10.1136/jnnp-2022-330104

Provided by Monash University