Transcript Details

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Reducing Cortical Lesions in MS with Ocrelizumab: Results from the ORATORI Study

Announcer:
Welcome to *NeuroFrontiers* on ReachMD. On this episode, we'll hear from Dr. Michael G. Dwyer, who's an Associate Professor of Neurology and Biomedical Informatics with the University at Buffalo in New York. He'll be sharing the findings from the ORATORI study, which explored if the B-cell therapy ocrelizumab affects cortical lesions in multiple sclerosis. Here's Dr. Dwyer now.

Dr. Dwyer:
This was a big project with a large dataset from a huge team of people that all came together to do this analysis. The big question in a lot of our minds has been over the last decade or so as we've come to understand that gray matter plays a really important part in multiple sclerosis development and potentially in its progression.

We think it might be related to this kind of PIRA concept of progression independent of relapse activity. And so especially in progressive MS, there's been a big question of exactly how the gray matter is involved. And at the same time, there's been a lot of research about these cortical lesions; we've known about them for about a hundred years that they exist. It's not new that they exist, but they're harder to see on histopathology. And until recently, they've been almost invisible on MRI. So most of the data historically has focused on these kind of classic T2 lesions—the obvious plaques that you see in multiple sclerosis when we know there are these large amounts of lesions in the cortex.

And so the question we wanted to ask was actually very simple: does a current B-cell-related therapy like ocrelizumab have the potential to actually impact these lesions to slow down these cortical lesions or stop them in multiple sclerosis? And so there's a lot of details about how we actually went about analyzing that, but the bottom line results are very straightforward and pretty heartening.

Ocrelizumab did have about a 75 percent reduction in the number of new and enlarging cortical lesions over a two-year period, and it had about an 80 percent reduction in the volume of them. So it does affect these lesions. And that was until now, a pretty open question of whether it was just knocking down those white matter lesions or whether it was having this more direct impact on the gray matter.

We also wanted to know whether it could have any potential impact on clinical progression. And what we saw was very interesting, actually. So in the placebo group, there's a strong correlation between disability progression and cortical lesions. And in the ocrelizumab group, which had reduced disability progression in general, they also had a lower relationship to cortical lesions.

So it's interrupting that relationship somehow. And I think that there's a lot more to investigate and to unpack in that line of research to understand these lesions, but we know historically that these cortical lesions from observational data are very involved in the progression of the disease. It's very interesting what we saw. It confirms what we know about cortical lesions being important for the disease, and it confirms for the first time in a big, blinded clinical trial setting that our current therapies can move the needle on that.

Announcer:
That was Dr. Michael G. Dwyer talking about the findings from the ORATORI study. To access this and other episodes in our series, visit *NeuroFrontiers* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!