

Interventional radiology: Mitigating symptoms, improving quality of life of MS patients

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Researchers report that performing angioplasty (a treatment that involves temporarily inserting and blowing up a tiny balloon inside a clogged artery to help widen it) on veins in the neck and chest is safe—and may be an effective way to treat the venous abnormalities found in those with multiple sclerosis and provide symptom relief. The findings were presented at the Society of Interventional Radiology's 37th Annual Scientific Meeting in San Francisco, Calif.

"Our results are important because there are an estimated 400,000 individuals affected by [multiple sclerosis](#) in the United States, some of whom experience symptoms that limit their quality of life in several ways. For many, it can be quite debilitating," explained Hector Ferral, M.D., an interventional radiologist at NorthShore University HealthSystem in Evanston, Ill. "These early results show that performing angioplasty on azygos and jugular vein lesions may have a positive impact on the symptoms of those individuals with MS and also could be an effective palliative treatment geared toward improving their quality of life," added Ferral, the study's lead investigator.

"Our experience showed that 95 percent of the individuals we evaluated had venous obstructions, supporting the concept that venous lesions are common in individuals with multiple sclerosis," said Ferral. "Based on follow-up that included ultrasound one week post procedure and clinic visits every three months, our results showed that people who have this

treatment are not exposed to fatal risks. It is our belief that portraying venous angioplasty of the azygos and jugular veins as a high-risk procedure is a widespread misconception that needs to be addressed and corrected," he noted. "In addition to these significant safety findings, we noted that angioplasty provided symptomatic benefit in 55 percent of the individuals we treated," said Ferral.

MS is classified as primary progressive, which means a gradually progressive disease without remission; relapsing remitting, which demonstrates acute attacks with intervals of slow improvements in symptoms; or secondary progressive, where a disease that was once relapsing remitting, is now slowly progressing.

This retrospective review examined results of 105 procedures performed in 94 individuals with MS (age range, 26-67 years old; 35 men, 59 women). This study's subgroups included 50 percent relapsing remitting, 39 percent secondary progressive, 6.4 percent primary progressive and 4.2 percent unknown. Jugular and azygos veins were evaluated with selective venography (imaging of veins after injection with a contrast dye) and intravascular ultrasound (a special imaging process that allows the physician to see from inside the blood vessels). Angioplasty was performed if the imaging confirmed reflux, a condition where valves become weak and don't close properly, allowing blood to flow backward, or a greater than 50 percent decrease in the vessel's diameter. If necessary, stents were then used to treat nonresponsive lesions or blockages. These individuals were given blood-thinning medications for six weeks after the treatment.

Ferral's team reported symptomatic improvement in 55 percent of the individuals treated, and 38 percent reported no improvement. Seven percent of patients did not comply with their follow-up visits and were considered to be lost to follow-up.

Close to 60 percent of those with relapsing remitting MS reported improvement in symptoms, the highest of all the subgroups in this study.

"These important results revealed that, for people with multiple sclerosis who experience debilitating symptoms, minimally invasive interventional [radiology](#) treatments can be an effective, palliative treatment that also may improve their quality of life," said Ferral.

"As interventional radiologists, our biggest challenge is to bring to the attention of other specialists, especially those physicians specialized in multiple sclerosis, the evidence that venous lesions, often classified as chronic cerebrospinal venous insufficiency or CCSVI, may be a true entity that deserves further attention and serious research," Ferral explained.

The Society of Interventional Radiology stresses the importance for MS patients to continue an on-going dialogue with their neurologists to discuss their treatment care.

In 2011, members of a Society of Interventional Radiology Foundation's Research Consensus Panel noted that evaluating people with multiple sclerosis who have narrowed jugular and azygos veins—and examining the value of widening those [veins](#) with angioplasty—warranted careful, well-designed research. The multidisciplinary panel indicated that the "mandatory goal" should be through large-scale, pivotal multicenter trials to explore CCSVI.

Provided by Society of Interventional Radiology

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