

WAYNE STATE
UNIVERSITY
SCHOOL OF MEDICINE

Chronic Cerebrospinal Venous Insufficiency or CCSVI and Multiple Sclerosis

We are posting this statement on our website in response to numerous queries from our patients at the Wayne State University Multiple Sclerosis Center as well as many others via the internet.

Recently, work published by the Italian investigators led by Dr Paolo Zamboni generated a lot of interest amongst the patient and scientific communities. A Canadian TV news channel also broadcast this study that further attracted the attention of thousands of patients with MS as well as others with an interest in multiple sclerosis.

The study by Dr Zamboni's group showed that the vast majority of patients with multiple sclerosis that they studied had narrowing of the veins that drain blood from the brain and the spinal cord into the heart. Consequently, they proposed, that stagnant drainage of venous blood leads to venous backflow and breakdown of the venous wall in the central nervous system which is comprised of the brain and the spinal cord. This concept of slow venous drainage has also been termed as "Chronic Cerebrospinal Venous Insufficiency or CCSVI". The authors further proposed that the breakdown of the venous blood vessel wall leads to the initiation of inflammation accompanied by local iron deposition. This eventually leads to the formation of lesions that can be visualized as the so-called "white spots" on brain MRI scans. Therefore, they propose that multiple sclerosis may be caused by a slow venous drainage due to blocking of the veins. They question the concept of multiple sclerosis being an autoimmune disease, instead it may be a vascular disease caused by blocked veins. The two main veins that were often seen as narrowed or blocked in their study were the internal jugular vein and the azygous vein. Their work also suggested that by opening the blocked veins with "stents", one could treat multiple sclerosis very effectively.

We believe that the results from Dr Zamboni's study are interesting and deserve further investigation in carefully designed and controlled studies. Reproducibility of data is critical to confirm original findings and make progress. Several investigators in North America, Europe, and elsewhere may be initiating similar studies to determine if venous blockage is indeed a phenomenon exclusive to multiple sclerosis and if it contributes to the disease pathology in multiple sclerosis. At this point, further studies are needed to confirm the findings made by Dr Zamboni and his colleagues. Furthermore, until such studies have been performed and analyzed, we do not believe that invasive and potentially dangerous procedures such as placing stents in the neck veins should be performed in an attempt to treat or "cure" the disease. Wayne State University Multiple Sclerosis Center does not offer any such treatment nor is this being performed by our affiliate hospitals i.e. Detroit Medical Center Hospitals.

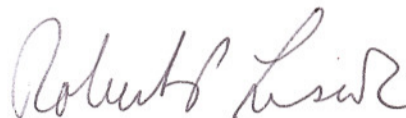
At Wayne State University Multiple Sclerosis Center, we plan to initiate similar studies to verify the findings of Dr Zamboni's study in the near future with the help of several experienced neuroradiologists who will assist in examining the MRI scans that focus on the venous system in the brain and the neck. These MRI scans known as MR venograms or MRV require special expertise and qualification to examine for which neuroradiologists are best trained. Our study design will also ensure proper controls and blinding of the study. Once the study has been

approved by the Wayne State University Institutional Review Board, we will post the study design and relevant details on this website. We hope to complete this work within 6 months of starting the study.

Finally, we remind that all patients should discuss their individual case with their health care provider including the neurologist as applicable. We also remind that before participating in any research, all patients should inquire about the research protocol, informed consent, the expertise and qualification of the investigator to conduct such research, and approval by the local body that oversees human research.



Omar Khan, MD
Professor of Neurology
Director, Multiple Sclerosis Center &
Image Analysis Laboratory
Wayne State University School of Med
Director, Multiple Sclerosis Clinic
The Detroit Medical Center
(A National Multiple Sclerosis Society Affiliate Clinic)



Robert Lisak, MD
Parker-Weber Chair of Neurology
Professor of Neurology, Microbiology &
Immunology
Wayne State University School of Med
Neurologist-in-Chief
The Detroit Medical Center