Reply:

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Reply:

We appreciate the opportunity to respond to criticisms of our article by Dolic et al.

Dolic et al state that the internal jugular veins (IJVs) show a normal variation in caliber due to compression from adjacent structures and suggest that we mistook these for strictures. To avoid this mistake, we chose only to take reductions of diameter of more than 90% into account. Variations in caliber due to external compression can be seen on Fig 2 at the craniocervical level, and they did not meet our definition of a stricture. The difference between these caliber variations and strictures as shown in Figs 3 and 4 is obvious and needs no further explanation. However, as Dolic et al pointed it out and as we wrote, our findings are not to be considered pathologic because no patient with multiple sclerosis was investigated.

We are well aware of the methodologic differences between duplex sonography and MR venography and their respective limitations, as stated in our work. We do agree that the reduced flow in the IJV in the upright position makes it difficult to acquire sufficient signal intensity to perform MR venography and that correlation with duplex sonography is needed.

Dolic et al rebut our discussion of the criteria for chronic cerebrospinal insufficiency. Although some formulations might not be optimal, they did not influence our findings and confirm the need to correlate positional MR venography findings with those in duplex sonography.

In their letter, they condemn that we do not discuss the reasons for the collapse of the IJV throughout and suggest citing their own works. Because the physiology of the cerebral venous outflow system is well-known, we referred to excellent pioneer works covering this topic. The strength of our work is that, contrary to other recent rather theoretic works, we can actually demonstrate in an objective way the physiologic changes in the cerebral venous blood outflow system.

Finally, they question the ability to acquire a reliable MR venography at 0.6T and point out that high-field magnets are less prone to artifacts in MR venography. This is undoubtedly true, and it will never be possible to acquire images of equal quality in a 0.6T compared with a 3T magnet. Due to machine design, it is, however, impossible to perform positional MR venography in high-field magnets.

We maintain that positional MR venography is a promising new tool for showing the cerebral blood outflow system and is suitable for detecting morphologic variances in the outflow system. However, its usefulness in patients with suspected CCVSI has yet to be investigated, and a correlation with duplex sonography in these patients is mandatory.

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