

Vertebral arteries, efficacy of colour doppler sonography in old people

Madam, ultrasound of the vertebral artery (VA) is a valuable technique, providing direct or indirect evidence of abnormal VA circulation, including lesions that lie proximal or distal to the VA itself.¹ The overall accuracy of transcranial Doppler sonography in the diagnosis of middle cerebral artery spasm has not been established.² A few studies have already been conducted about vertebral arteries in comparison with carotid arteries which can be attributed to difficulty of surgical techniques in vertebral arteries which hinders the application of maintaining treatment methods in most centers.³

We studied an 86-year-old man who had no clear signs of cerebral arteries disease and insufficiency symptoms of vertebrobasilar. Common and interior carotid arteries as well as vertebral arteries of both sides were

separating from subclavian which lead to relative increase of blood circulation velocity there. About 70% of vertebral arteries origin should be observed using advanced colour Doppler sonography sets and conducting the sonographies by experts.⁴ Of course, more previous studies have often been conducted on youths and observing their arteries is naturally easier than that of older people having meandered vessels.⁵ All studies are the same in one point, i.e., observing left vertebral artery origin is more difficult than the right one. The difference may root from unnatural separation of the left vertebral artery directly from the aorta arch, making its observation difficult or impossible.⁶

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evaluated by 7.5 MHz linear probe and using Hitachi set EUB-525. Doppler angle was set less than 60° in. The measured parameters included passive systole velocity (PSV), end diastolic velocity (EDV), vascular resistance index (RI), and diameter measured and registered at second part of vertebral artery (V2) and C4-C5 segment.

Second part of the vertebral artery was completely visible. Diameter of the right vertebral artery was 3.24 and the left one was 3.52. PSV of the right and left sides was 35.77 and 36.29, respectively. Additionally, RI of the right vertebral was 0.71 and of the left one was 0.69.

The study demonstrated the efficacy of color Doppler sonography in evaluating vertebral arteries in an old person. High velocity observed at vertebral arteries origin likely demonstrates partial narrowness of the arteries at the point

References

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