Vertebral artery loop formation causing severe cervical nerve root compression

A 35-year-old woman presented with 10 years of stabbing pain in her neck and upper back above her right scapula, sometimes radiating into both arms. Examination results were normal. Somatosensory evoked potentials showed significantly prolonged latency of the right C4 nerve root. Cervical spine MRI demonstrated tortuous vertebral arteries looping most notably into the C3-C4 neural foramina bilaterally, compressing the C4 nerve roots, right worse than left (figures 1 and 2).

Vertebral artery loop formation is an uncommon cause of cervicobrachial neuralgia caused by direct compression of the nerve root.1 Surgical decompression is usually reserved for cases that fail conservative treatment.2

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