

Intracranial plaque regression after intensive medical treatments: a high-resolution MRI observation

Wei-Hai Xu¹, Ming-Li Li², Shan Gao¹

¹Department of Neurology, ²Department of Radiology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing 100730, China

Correspondence to: Dr. Wei-Hai Xu, MD. Department of Neurology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Shuaifuyuan 1, Dongcheng District, Beijing 100730, China. Email: xuwh@pumch.cn.

Submitted Jul 17, 2014. Accepted for publication Jul 28, 2014.

doi: 10.3978/j.issn.2305-5839.2014.08.09

View this article at: <http://dx.doi.org/10.3978/j.issn.2305-5839.2014.08.09>

A 54-year-old female had bilateral infarcts in a parasagittal distribution (*Figure 1A*). Digital subtraction angiography showed a low-grade stenosis at the terminal segment of left internal carotid artery (ICA), with a plaque on high-resolution magnetic resonance imaging (HR-MRI) (*Figure 1B,C*). Clopidogrel 75 mg/day, atorvastatin 60 mg/day, and

amlodipine 5 mg/day were prescribed. Eighty days after the treatments, ICA plaque regression was observed on repeated HR-MRI (*Figure 1D*). There was no stroke recurrence. Our case suggests HR-MRI has made it possible to quantify intracranial plaque burden and evaluate its progression (1). Intensive medical treatments may play a role in reversing intracranial atherosclerosis, like they do in extracranial atherosclerosis (2).

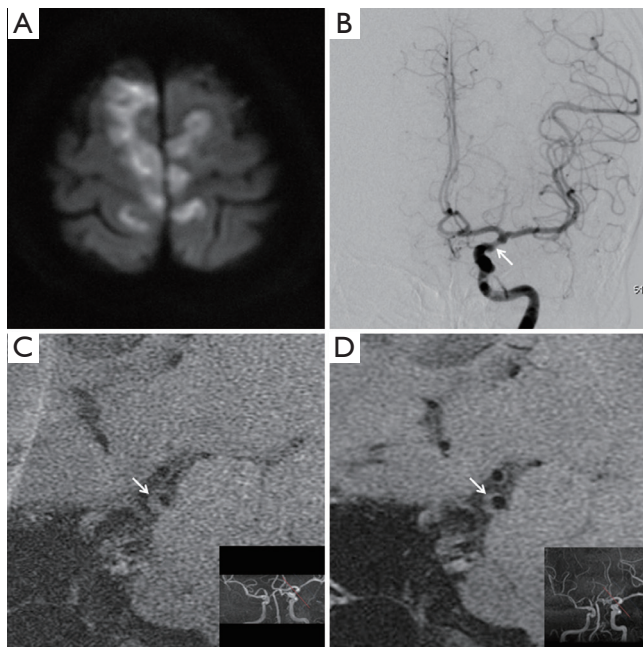


Figure 1 Diffusion weighted imaging (A) and angiography (B) showed ischemic infarcts due to left internal carotid artery stenosis with an azygous anterior cerebral artery. On T1-weighted images of high-resolution MRI, a plaque (arrow, C) was identified, which was retracted (arrow, D; maximum plaque area from 0.15 to 0.10 cm²) after treatments.

Acknowledgements

Funding: Supported by Program for New Century Excellent Talents in University of China (NCET-12-0069).

Disclosure: The authors declare no conflict of interest.

References

1. Xu WH, Li ML, Gao S, et al. In vivo high-resolution MR imaging of symptomatic and asymptomatic middle cerebral artery atherosclerotic stenosis. *Atherosclerosis* 2010;212:507-11.
2. Okazaki S, Yokoyama T, Miyauchi K, et al. Early statin treatment in patients with acute coronary syndrome: demonstration of the beneficial effect on atherosclerotic lesions by serial volumetric intravascular ultrasound analysis during half a year after coronary event: the ESTABLISH Study. *Circulation* 2004;110:1061-8.

Cite this article as: Xu WH, Li ML, Gao S. Intracranial plaque regression after intensive medical treatments: a high-resolution MRI observation. *Ann Transl Med* 2014;2(8):82. doi: 10.3978/j.issn.2305-5839.2014.08.09