

Cardiac Imaging

Misleading Imaging Examinations

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A 52-year-old man developed diplopia and was evaluated with a head CT and MRI and MR angiography of the head and neck, at an outside hospital. The three-dimensional reconstructions of the MR angiography showed significant stenosis of the vertical section of the lithoid segment of the left internal carotid artery (Figure 1).

Conventional invasive digital subtraction angiography was then performed in our hospital to assess the degree of carotid stenosis and to guide further therapy. The angiography demonstrated a normal lu-

men of both carotids without significant stenoses (Figure 2).

This case demonstrates that the assessment of images from diagnostic methods should always be performed with particular caution. Artifacts that may be obvious in the source images cannot be detected in the reconstructions, which are usually more impressive and are commonly used to better convey diagnostic information. Modern technology should be used cautiously, so as to minimize false positive interpretations due to technical flaws.

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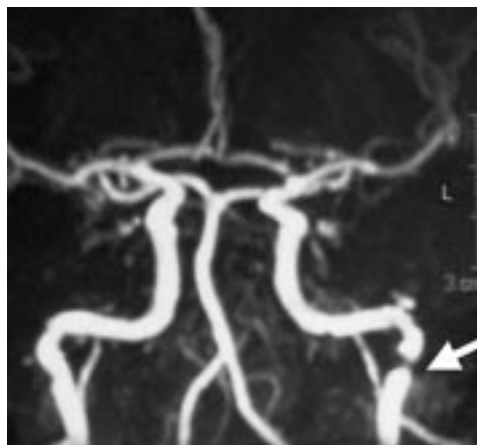


Figure 1. Three-dimensional reconstructions of the MR angiography, with an apparent significant stenosis of the left internal carotid artery (arrow).

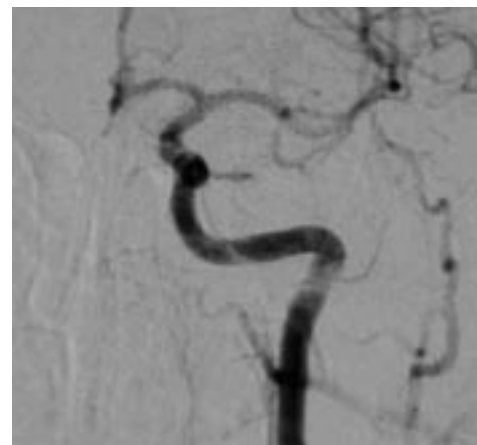


Figure 2. Digital subtraction angiography of the left internal carotid artery demonstrating the absence of significant stenoses.