

**Stenoocclusive Disease of the Intracranial Artery:
Evaluation with Time-Of-Flight, wide Field-Of-Fiew Contrast-Enhanced
MR Angiography and Digital Subtraction Angiography**

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목적 :

3D Time-of-Flight (TOF) MR angiography (MRA) and contrast-enhanced (CE) MRA are widely used as screening methods for intra- and extracranial stenoocclusive diseases, respectively. CE MRA for the evaluation of the extracranial carotid artery can cover the large FOV from the aortic arch to the circle of Willis with significant evolution of the MR hardware and software capabilities. Our purpose was to compared the accuracy of wide FOV CE MRA and TOF MRA in detecting the intracranial arterial stenosis and occlusion.

대상 및 방법 :

Twenty-five patients (18 male and 7 female; 32 ~ 80 years old; median, 62 years) underwent 3D TOF, wide FOV CE MRA and digital subtraction angiography (DSA) for suspected cerebrovascular lesions. All three studies were performed within a 5-day period. Two readers blinded to prior estimated or calculated stenoses, patient history and clinical information examined 275 vessel segments. Lesions were categorized as normal to mild (0-29%), moderate (30-60%), severe (70-99%), or occluded. Stenoses graded as moderate, severe or occluded were considered diseased vessel segments.

결과 :

A total of 57 diseased vessel segments were identified. Wide FOV CE MRA revealed similar sensitivity and specificity (91.2% and 92.7%) with that of 3D TOF MRA (94.7% and 91.3%) for intracranial stenosis.

결론 :

Wide FOV CE MRA has high accuracy in the evaluation of intracranial stenoocclusive disease, comparable to that of 3D TOF MRA. It may replace the TOF brain MRA, and can be used as screening method for evaluation of intracranial stenoocclusive disease as well as extracranial carotid stenosis.