

**Evaluation of Cerebral Aneurysm with High Resolution MR Angiography
using Slice Interpolation Technique:
Correlation with Digital Subtraction Angiography (DSA) and MR Angiography (MRA)**

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Purpose: To evaluate the results of high resolution, fast speed slice interpolation MR angiography (MRA) and digital subtraction angiography (DSA) thereby examining the potentiality of primary non-invasive screening test for intracranial aneurysm.

Materials and Method: In a total of 26 cerebral aneurysmal lesions from 19 patients, the images were obtained with a time-of-flight (TOF) MR angiography technique using 1.5T superconducting MR system (Vision, Siemens, Erlangen, Germany). The total image volume was divided into 4 slabs with 49 partitions each. To save time, only 24 phase encode steps were measured and interpolated to 48. The parameters used were TR/TE/FA=30/6.4/25, matrix 160 X 512, FOV 150 X 200, 7 minutes 42 seconds of scan time, effective thickness of 0.7 mm and an entire thickness of 102.2 mm. MIP was used for the image analysis, and multiplanar reconstruction (MPR) technique was used in cases of intracranial aneurysm.

Results: Among 26 intracranial aneurysmal lesions from 19 patients, 14 were ruptured aneurysm (RA) and 12 were unruptured aneurysm (UA). Eight lesions were less than 2mm in size, 9 lesions were 3-5mm, 7 were 6-9mm and 2 were larger than 10mm. On initial exams, 25 out of 26 aneurysmal lesions were detected in both MRA and DSA showing 96% sensitivity.

Conclusion: High resolution MRA using slice interpolation technique showed equal results as those of DSA for the detection of intracranial aneurysm, and may be used as a primary non-invasive screening test in the future.