## Study Protocol

# Follow-up after stent-assisted aneurysm coiling

Interventional Neuroradiology

**We were able to obtain accurate visualization of the parent vessel and verify occlusion of this aneurysm and patency of the stent.**

**Courtesy of**
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**Supported by**
*syngo* DynaCT

**System & Software**
Artis zee biplane VC21
*syngo* X Workplace VB21

## Case Description

**Patient history**
73-year-old female patient.
Left middle cerebral artery (MCA) aneurysm that was treated with stent-assisted coil embolization in 2005. Because of her history of contrast allergies, we decided to complete a *syngo* DynaCT run with IV injection of contrast medium in the angiography suite for the purpose of improved visualization and monitoring the patient post IV injection.

**Diagnosis**
In 3D rotational angiography we identified that the left MCA aneurysm was completely occluded, status post stenting and coiling. We were able to obtain accurate visualization of the parent vessel and verify occlusion of this aneurysm and patency of the stent. There was no evidence of in-stent stenosis.

**Treatment**
The quality of the study was very good, with no evidence of any other abnormalities in the circle of Willis. She tolerated this imaging study without incident and was discharged home. Our plan will be to follow up with this patient in 12 months with repeated imaging study.

**General comments**
At our institution we are using *syngo* DynaCT runs with IV injection routinely for patients with the following concerns: stent patency, in-stent stenosis, residual filling of aneurysms s/p clipping and/or coiling, and vasospasm.

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# Follow-up after stent-assisted aneurysm coiling

| Acquisition protocol | 20sDCT Head 109kV |
|---|---|

**Injection protocol**

| | |
|---|---|
| Catheter position | IV injection antecubital vein (18 G) allergy prep medication |
| Contrast medium (CM) | 370 mg iodine/mL |
| Dilution | No |
| Injection volume | 80 mL |
| Injection rate | 4 mL/s |
| Duration of injection | 20 s |
| X-ray delay | 14 s |
| Power injector used | Yes |

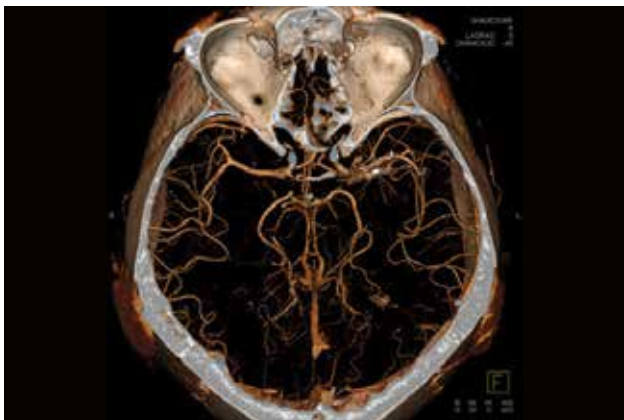| Reconstructions | Primary | Secondary |
|---|---|---|
| Name | DynaCT Head Nat Fill HU | DynaCT DSA Dual Head |
| VOI size | Full | Small |
| Slice matrix | 512 × 512 | 512 × 512 |
| Kernel type | HU | HU |
| Image characteristics | Normal | Normal |
| Reconstruction mode | Nat fill | Nat fill |
| Viewing preset | DynaCT Head | DynaCT Head |

## Clinical Images



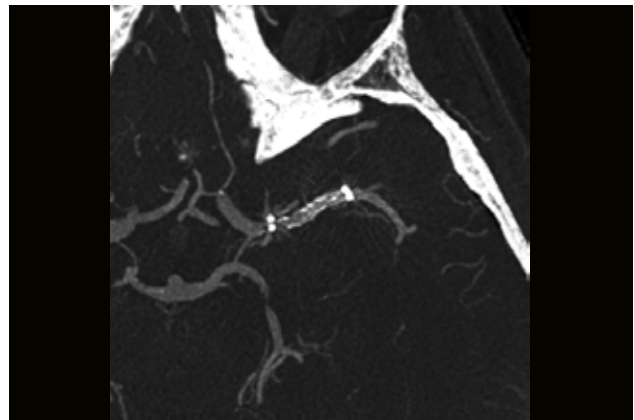Figure 1: VRT (Volume Rendering Technique) of *syngo* DynaCT run with IV injection, visualizing the X stent



Figure 2: Axial MPR reconstruction outlining full patency of the X stent in the left middle cerebral artery (with secondary reconstruction)

# Clinical Images



Figure 3: Axial MPR reconstruction showing X stent in the left middle cerebral artery

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