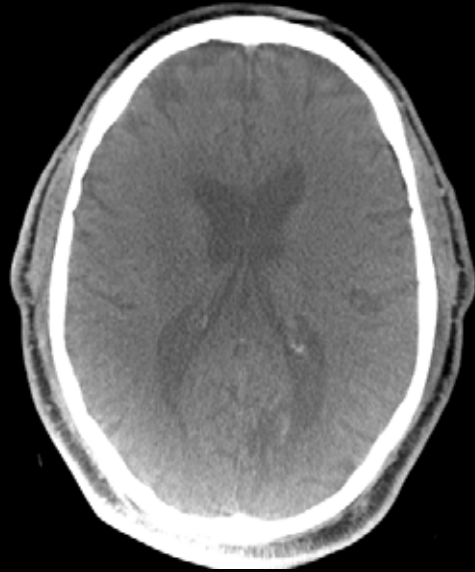


Study Protocol

One-stop-shop management for stroke

Neuro Interventions



Case Description

Patient history

56-year-old male. Right hemiparesis and aphasia with 75-minute onset. No intubation or sedation of the patient.

Diagnosis

Total occlusion of arteria cerebri media.

Treatment

Thrombectomy with SAVE technique.

General comments

Direct admission of the patient to the angio suite for diagnostics and therapy (one-stop-shop management). Check for potential bleeding with the help of *syngo* DynaCT. Carotid bifurcation visible. A native FDCT scan was performed within 15 minutes of the patient arriving at the hospital. After IV injection of contrast media, a biphasic FDCTA scan was performed.

We timed the first phase of the FDCTA scan after a bolus-tracked digital subtraction angiography (the contrast agent must be visible in the intracranial internal carotid artery), while the second phase was acquired automatically with a delay of 5 s. The first phase shows the occlusion of the arteria cerebri media. The second phase of the FDCTA scan was used to additionally evaluate late collaterals. An occlusion or relevant stenosis of the proximal internal carotid artery could be excluded with the same acquisition.

Tips & Tricks:

Very good stabilization of patient's head possible when a head holder is used, even for non-anesthetized patients.

Courtesy of

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Supported by

syngo DynaCT

System & Software

Artis Q biplane VD11
syngo X Workplace VD10

Protocol – Part 1

Acquisition protocol	20sDCT Head Clear 109kV
Injection protocol	
Contrast medium (CM)	N/A
Reconstructions	1. Reconstruction
Name	DCT Head Clear
VOI size	Full
Slice matrix	512x512
Kernel type	HU
Image characteristics	Normal
Reconstruction mode	Nat Fill
Viewing preset	DCT Head

Clinical Images

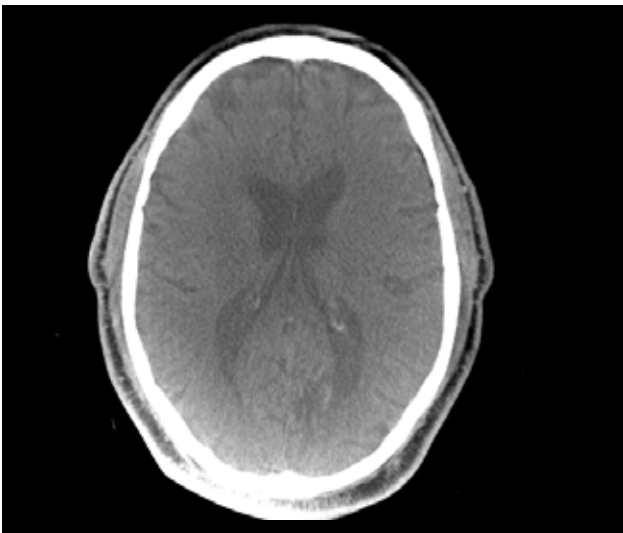


Fig. 1. DCT native, check for severe bleeding.
1–4 Thin MPRs from skull base to skull cap

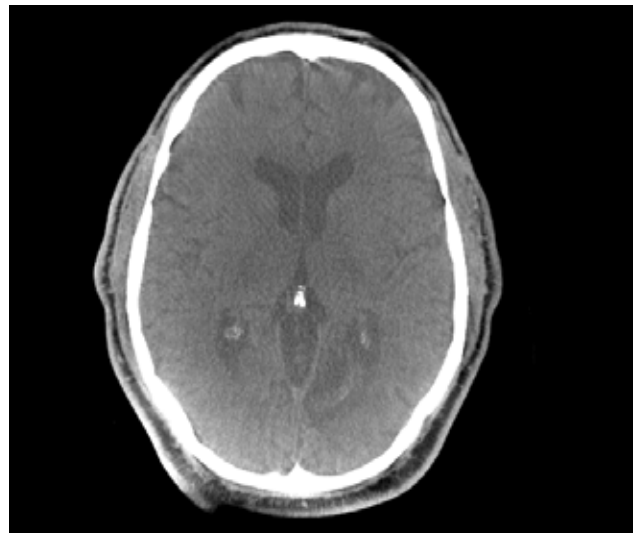


Fig. 2.

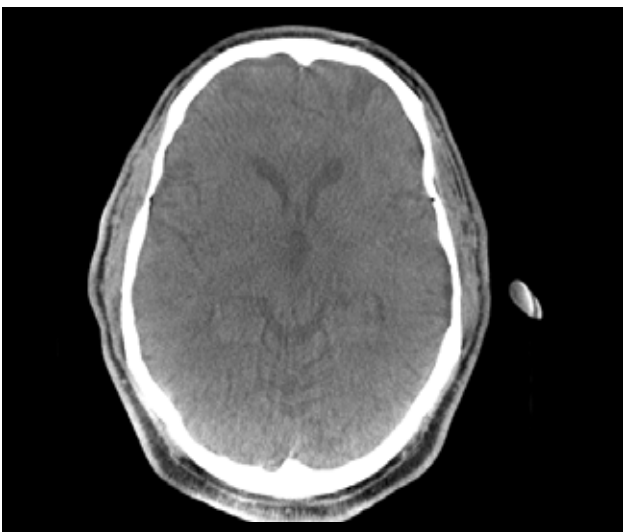


Fig. 3.

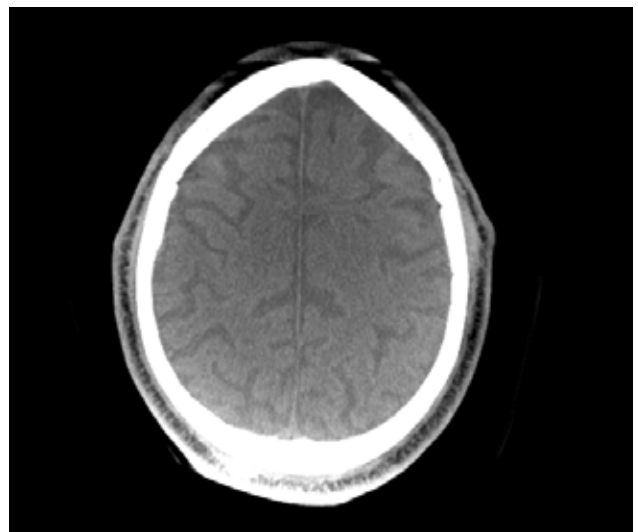


Fig. 4.

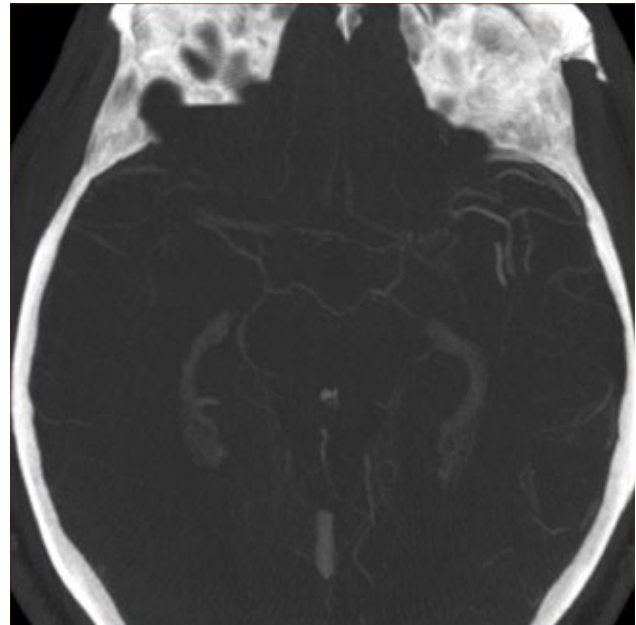
Protocol – Part 2

Acquisition protocol	10sDCT DSA Head 70kV
Injection protocol	
Catheter position	Intravenous injection
Contrast medium (CM)	400 mg/mL iodine
Dilution	No
Injection volume	60 mL contrast media followed by 60 mL saline chaser
Injection rate	5 mL/s
Duration of injection	12 s for CM + 12 s for saline
X-ray delay	Bolus watching - start first run when contrast agent is seen in the intracranial internal carotid artery. Second run with automatic delay of 5 s.
Power injector used	Yes
Reconstructions	
1. Reconstruction	
Name	DCT Head Clear for 1st and 2nd rotation
VOI size	Full
Slice matrix	512x512
Kernel type	HU
Image characteristics	Normal
Reconstruction mode	Nat Fill
Viewing preset	DCT Head

Clinical Images

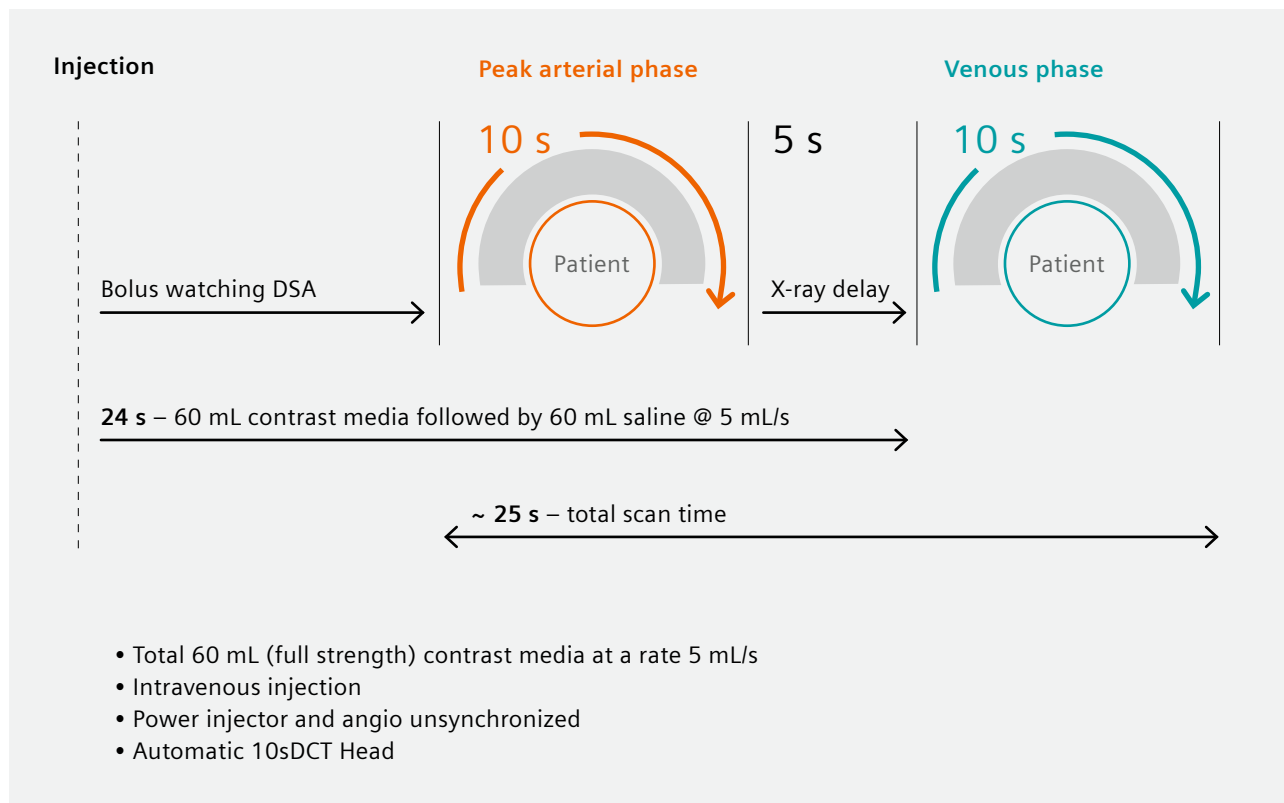


DCT arterial phase. MCA left occlusion.



DCT delayed phase. Collaterals visible.

Biphasic Flat Detector CT Angiography Protocol



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