

BLOODPOOLAGENTS

CLINICAL EXAMPLES

**Exclusion of Thrombosis of the
Left Subclavian Vein for Dialysis Shunt**

Exclusion of Thrombosis of the Left Subclavian Vein for Dialysis Shunt

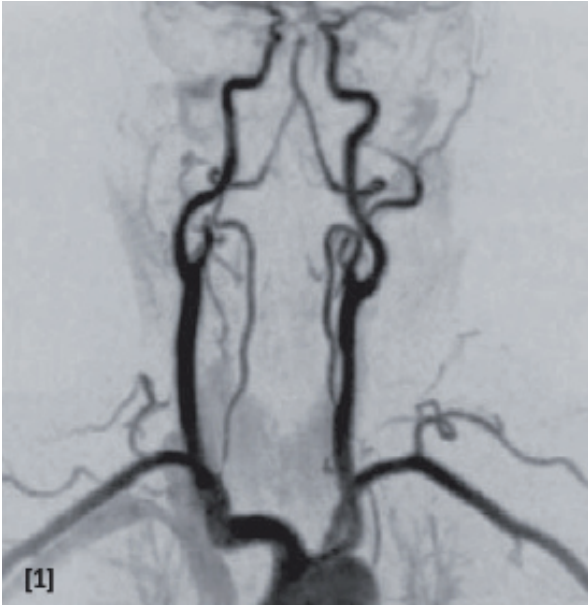
MR phlebography of the left shoulder

MR Equipment		
Type	Siemens MAGNETOM	
Field Strength (T)	1.5	
Gradient Amplitude (mT/m)	45	
Gradient Rise Time (ms)	0.2	
Coil(s)	Body Matrix + Spine Matrix	
MR Sequence Parameters	Dynamic	Steady State
Sequence	FLASH 3D	FLASH 3D
Repetition Time (ms)	3.39	3.39
Echo Time (ms)	1.36	1.36
Flip Angle (°)	12	12
Bandwidth (Hz/Pixel)	475	475
Slice Thickness (mm)	2	2
Number of Slices	72	72
FOV (mm)	320	320
Phase Field of View (%)	100	100
Acquisition Matrix (Pixel)	320 x 289	320 x 289
Resolution (mm ²)	1 x 1.1	1 x 1.1
Image Matrix (Pixel)	512 x 512	512 x 512
Acquisition Time (s)	24	24
Fat Saturation (yes/no)	yes	yes
Parallel Imaging (Factor)	no	no
Contrast Agent Application (all i.v.)	Dynamic	Steady State
Test Bolus Contrast Media	no test bolus	
Application Type		
Volume @ Flow Rate		
Testbolus NaCl	no test bolus	
Application Type		
Volume @ Flow Rate		
MR Angiography		
Application Type	automated	
Volume @ Flow Rate	10 ml @ 2 ml/s	
Time of Delay Injection to Sequence Start (s)	bolus tracking	
NaCl		
Application Type	automated	
Volume @ Flow Rate	20 ml @ 2 ml/s	

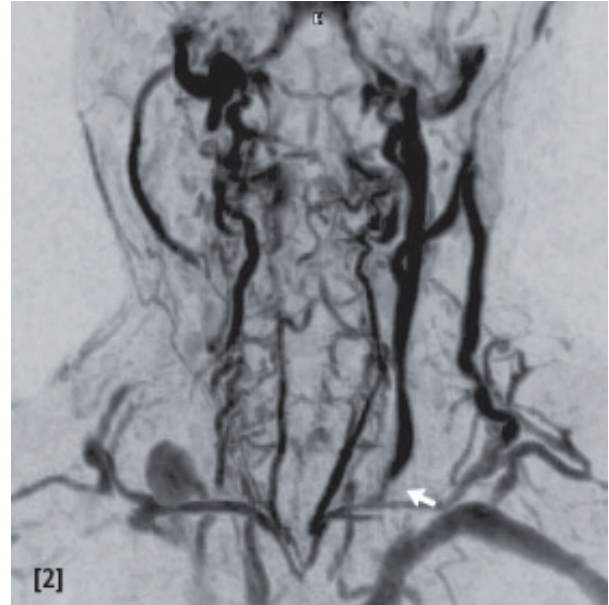
With kind permission of
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Summary of findings

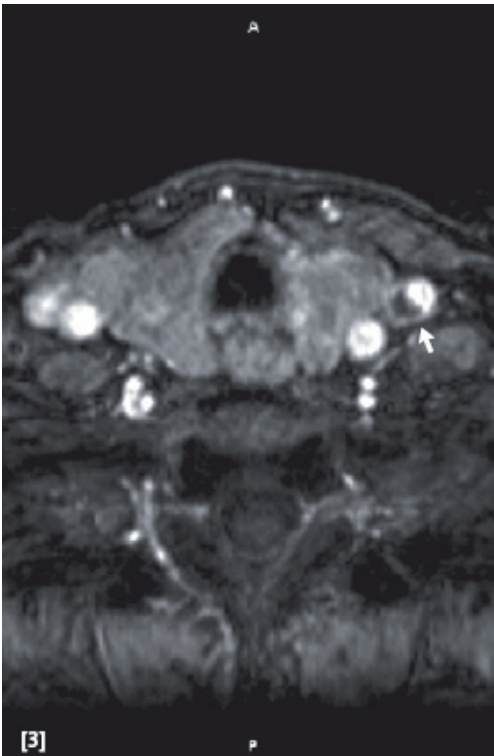
Condition following right neck dissection and non-delimitable jugular veins, now thrombosis of the proximal jugular vein at the left dialysis shunt arm. In particular, the 4.5 s temporal high-resolution TWIST® MRA in conjunction with Gadofosveset enables excellent differentiation of the individual phases; bolus timing using a test or care bolus is not required.



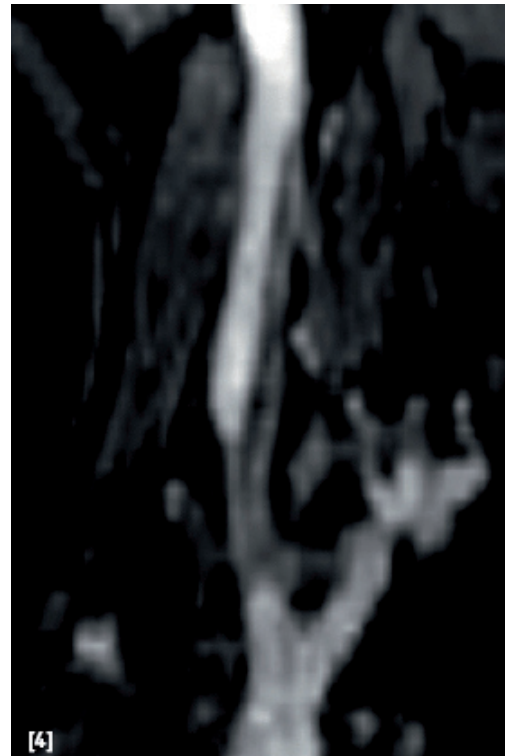
[1] Arterial phase of the dynamic TWIST® MRA. Coronary inverted MIP.



[2] Venous phase, occlusion of the left jugular vein just before join to collateral veins. Condition after right neck dissection for carcinoma of the floor of the mouth, non-delimitable right internal and external jugular veins.



[3] Transversal steady-state image showing the vessel wall, plaque, and free lumen.



[4] Imaging of the occlusion of the jugular vein in its course by means of curved planar reformation (CPR).