

BLOODPOOLAGENTS

CLINICAL EXAMPLES

**Postpartum Right Pelvic
and Deep Venous Thrombosis**

Postpartum Right Pelvic and Deep Venous Thrombosis

Clinical details

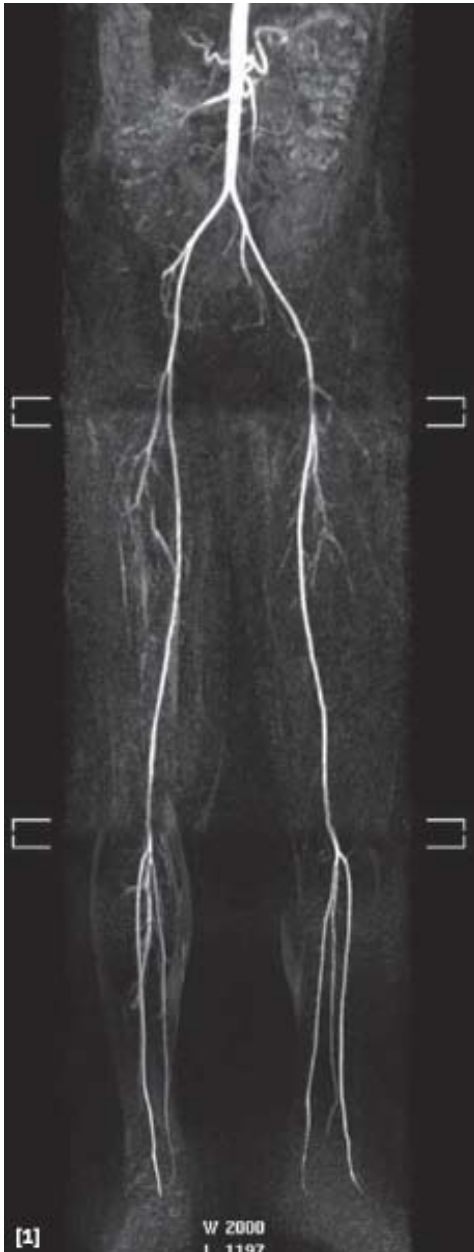
27 year-old patient with hereditary protein C deficiency and postpartum deep venous thrombosis in the right leg.

MR Equipment			
Type	Philips Achieva R11		
Field Strength (T)	1.5		
Gradient Amplitude (mT/m)	33		
Gradient Rise Time (ms)	0.2		
Coil(s)	Q-Body + Synergy-Body (Lower legs)		
MR Sequence Parameters	Dynamic	Steady State	
Sequence	T1 3D FFE	T1 3D FFE	
Repetition Time (ms)	2.70 / 2.80 / 4.80 (shortest)	4.80 / 4.90 / 5.8 (shortest)	
Echo Time (ms)	0.89 / 0.94 / 1.36 (shortest)	1.42 / 1.44 / 1.68 (shortest)	
Flip Angle (°)	25	25	
Bandwidth (Hz/Pixel)	658 / 658 / 217	217 / 217 / 217	
Slice Thickness (mm)	1.70 / 1.50 / 1.10	1.50 / 0.99 / 0.49	
Number of Slices	65 / 60 / 80	90 / 95 / 170	
FOV (mm)	451	451	
Phase Field of View (%)	75	75	
Acquisition Matrix (Pixel)	384 x 285 / 336 x 252 / 400 x 300	400 x 300 / 416 x 312 / 464 x 348	
Resolution (mm ³)	M: 1.48 x 2.33 x 3.40	M: 1.13 x 1.48 x 3.00	
M: measured	R: 1.04 x 1.04 x 1.70	R: 0.88 x 0.88 x 1.50	AI
R: reconstructed	M: 1.34 x 2.11 x 3.00	M: 1.08 x 1.42 x 1.98	
AI: Aorto-Iliac	R: 0.88 x 0.88 x 1.50	R: 0.88 x 0.88 x 0.99	UL
UL: Upper Leg	M: 1.13 x 1.77 x 2.20	M: 0.97 x 0.97 x 0.98	
LL: Lower Leg	R: 0.88 x 0.88 x 1.10	R: 0.52 x 0.52 x 0.49	LL
Image Matrix (Pixel)	512 x 512	512 x 512	
Acquisition Time (s)	12.60 / 13.40 / 35.90	100 / 111 / 174	
Fat Saturation (yes/no)	no	no	
Contrast Agent Application	Dynamic	Steady State	
Test Bolus Contrast Media	Gadofosveset		
Application Type	fluoroscopic triggering!		
MR Angiography			
Application Type	automated		
Volume @ Flow Rate	10 ml @ 1.2 ml/s		
NaCl			
Application Type	automated		
Volume @ Flow Rate	30 ml @ 0.6 ml/s		

With kind permission of
 Dr. Guido M. Kukuk
 PD Dr. Winfried A. Willinek
 Radiologische Universitätsklinik Bonn
 Director: University Professor Dr. H. Schild

Summary of findings and diagnosis

Complete thrombotic occlusion of the infrarenal inferior vena cava. Pelvic and bilateral deep venous thrombosis on the lower extremities due to established hereditary protein C deficiency.



[1] MR angiography of the pelvis and leg (T1 3D FFE with Gadovosfiset) in first-pass. MIP from suprarenal level to lower leg. No evidence of relevant arterial stenoses.



[2] Higher resolution coronary steady-state image of the abdominal and pelvic vessels. A thrombus completely occludes the infrarenal inferior caval vein (arrow). Pronounced collateralization above the left ovarian vein (arrowhead).



[3] Curved Multiplanar Reformation (curved MPR) of a high-resolution steady-state image of abdominal and pelvic vessels for better imaging of the anatomical course of the right pelvic blood stream. The thrombosis of the inferior caval vein continues in the pelvic blood stream.



[4] Maximum Intensity Projection (MIP) of subtracted high-resolution steady-state images of the femoral vessels. Complete thrombosis of the right superficial femoral vein, which is not imaged. The left Superficial femoral vein is also completely thrombotic from the mid third of the upper leg (arrow). The superficial veins and great saphenous vein are extensively perfused on both sides.



[5] Coronary MPR of a contrast agent enhanced CT of the same patient. The procedure was conducted as part of a diagnosis to exclude a lung embolism. The diagnosis made from the MR angiography of a thrombosis of the Inferior caval vein was hereby confirmed (arrows).