Case Report: Extensive Vascular Malformation

Randolph Otto, M.D.
Seattle Children’s Hospital, Department of Radiology, Seattle, WA, USA

Patient history

18-year-old female undergoing MR examination of the left leg following venous malformation sclerotherapy.

Sequence details

Images have been acquired using our 1.5T MAGNETOM Avanto and the Body Matrix coil.
MR Angiography (MRA) using 11 ml Magnevist administered IV.
TE 1.05 ms, TR 2.45 ms, FOV 453 x 500, matrix 464 x 512, PAT factor 3.0, partition time 3.27 sec, acquisition plane coronal.

Figure 1: 5 of 60 images displaying the major aspects of the clinical anatomical abnormality.

Imaging Findings

Demonstrated are collections of abnormal vessels involving the superficial and deep spaces of the left thigh and buttock region. Multiple muscle groups are involved, including the gluteus maximus medius and minimus, that the intermedius and part of the vastus medialis muscle. The lateral aspect of the biceps femoris is also involved. There has been resection of the vastus lateralis musculature. There is no abnormal vessel extending into the pelvic region.
Dynamic imaging again demonstrates a large blush of contrast enhancement involving the mid thigh. There are two prominent vessels filling in the early arterial phase, seen in the lateral proximal and mid aspect of the left thigh. These veins appear to be draining earlier than on the prior examination, and likely represent a small high flow component of this vascular malformation. There are no enlarged arteries. Extensive vascular malformation is well visualized on the syngo TWIST acquisition.

Results and Discussion

The two new early enhancing prominent vessels in the mid and proximal lateral aspect of the left thigh, likely representing early draining veins, are readily apparent on this follow-up exam.