

# Spontaneous radiocephalic arteriovenous fistula presenting as a phalangeal mass

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A 28-year-old woman presented to the clinic with a complaint of swelling in the left index finger. She had no history of trauma. On physical examination, there was a pulsatile mass in the left index finger. Magnetic resonance imaging and magnetic resonance angiography were performed for differential diagnosis of a vascular mass or malformation. All magnetic resonance sequences showed a heterogeneous lesion with signal void. Magnetic resonance angiography revealed an arteriovenous fistula (arrows) on the radial side of the left index finger (Figures 1a–c), between the radialis indicis artery and cephalic vein.



**Figure 1.** a–c. Coronal magnetic resonance angiography scans showing an arteriovenous fistula (arrows) between the radialis indicis artery and cephalic vein on the radial side of the left index finger.

Spontaneous radiocephalic arteriovenous fistula is an uncommon condition. Symptoms are commonly secondary to an acute rupture or compression of adjacent structures. The pulsatile nature of the mass in the hand precludes a diagnosis of synovial cyst or giant cell tumour. Differential diagnosis is then important to avoid a rheumatological puncture (such as cyst drainage) of this mass, which would be dramatic because puncture of an arteriovenous fistula may result in massive bleeding.

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