

## IMAGES IN INTERVENTION

# Successful Percutaneous Treatment of an Arteriovenous Fistula After Radial Primary Percutaneous Coronary Intervention

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Although the incidence of radial arteriovenous fistula after percutaneous coronary intervention is extremely rare (1), its presence might be associated with disabling symptoms requiring invasive treatment (2,3) or surgery (4).

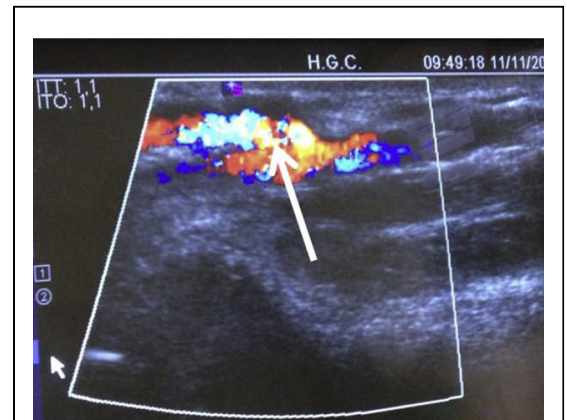
A 56-year-old man with a history of myocardial infarction treated with percutaneous coronary intervention through the right radial artery consulted the

outpatient clinic with recurrent pain at the right wrist 1 year after the intervention. Physical exam revealed a pulsatile mass with thrill at the level of the distal right radial artery (Figure 1) that appeared 3 months before consulting. Echo-Doppler showed a clear arteriovenous fistula with a large neck (23 mm) (Figure 2) and severe vein dilation at the level of the mass.



**FIGURE 1** Mass at the Right Wrist

Pulsatile mass with bruit and thrill at the level of the radial arteriovenous fistula.

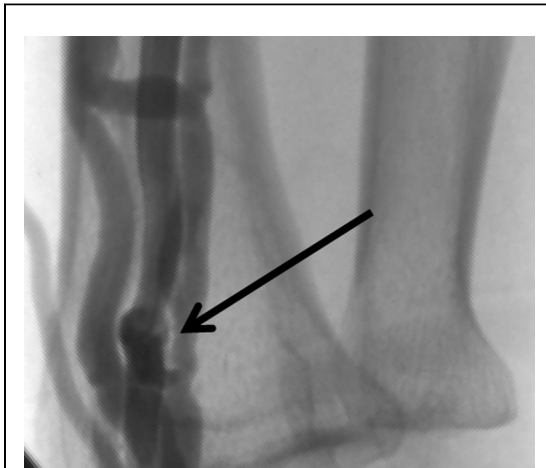


**FIGURE 2** Echo-Doppler

Color Echo-Doppler showed a large arteriovenous fistula with a 23-mm neck (white arrow).

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**FIGURE 3** Pre-Procedural Angiography

Angiography demonstrates a patent radial arteriovenous fistula (arrow) with profuse filling of the venous system.



**FIGURE 4** Post-Procedural Angiography

Angiography reveals complete sealing of the arteriovenous fistula after deployment of 2 covered stents.

Considering the persistent pain and the failure of conservative measures with external compression, invasive treatment with endovascular sealing was planned.

Anterograde transbrachial access with a 6-F introducer was performed, and a large arteriovenous fistula was confirmed on angiography (Figure 3). A 6-F multipurpose guiding catheter and a Hi-Torque Balance Heavyweight guidewire (Abbott Vascular, Santa Clara, California) were used to implant a 2.8 × 16-mm Graftmaster stent (Abbott Vascular). Control angiography revealed a residual leak at the proximal edge of the first stent, and a larger covered stent (Graftmaster 3.2 × 16 mm) was overlapped

proximally. The final angiogram showed complete sealing with normal flow and a patent distal palmar arch (Figure 4). The patient was discharged 1 day after the procedure pain free and with a good radial pulse. Antiplatelet recommendation consisted of aspirin 100 mg/day indefinitely and clopidogrel 75 mg/day for 1 month.

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**KEY WORDS** endovascular procedure, percutaneous coronary intervention, stent, vascular fistula