

IMAGES IN INTERVENTION

Lower Limb Bone Metastasis Discovered After Femoropopliteal Artery Stenting



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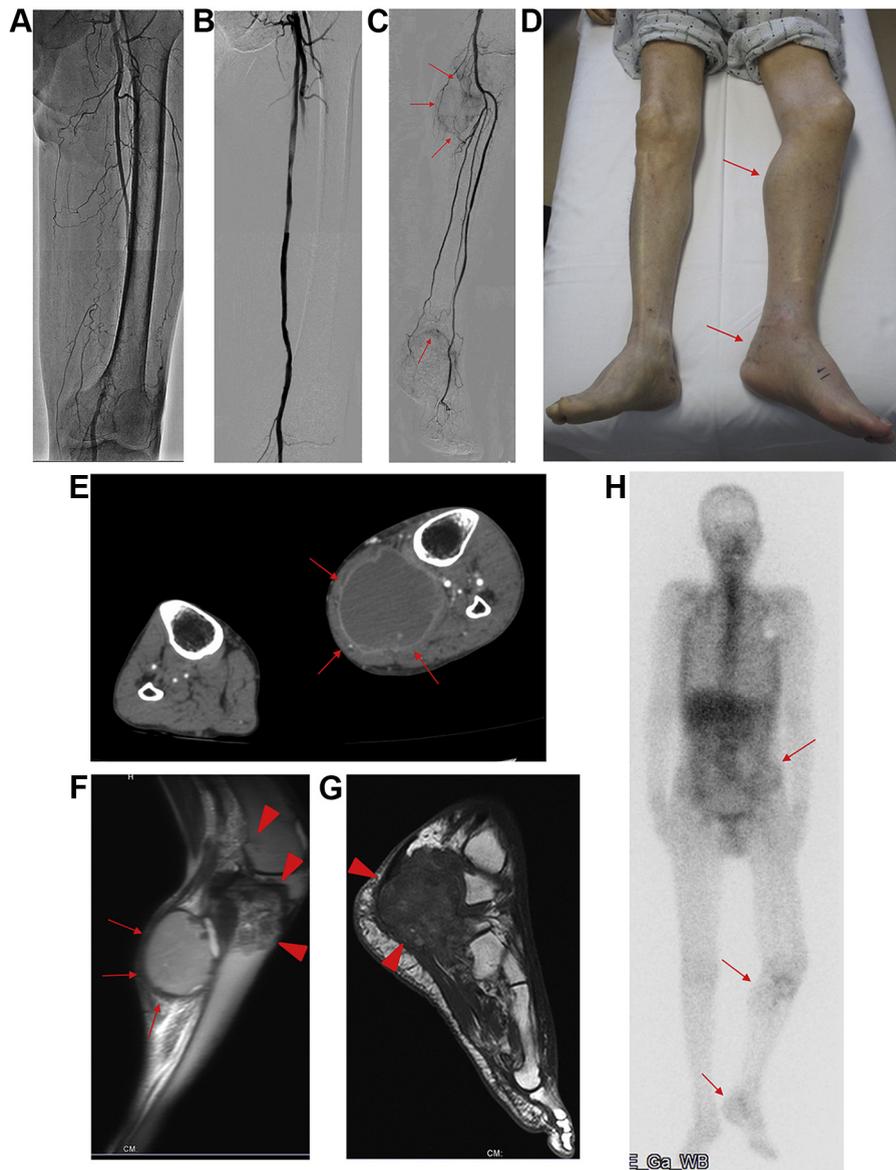
According to a previous study, approximately 10% of patients with critical limb ischemia are affected by malignant disease (1). Despite its high prevalence, an occult malignancy may be underappreciated in this patient population.

A 71-year-old man with hypertension, paroxysmal atrial fibrillation, and hypertrophic cardiomyopathy who had undergone implantable cardioverter-defibrillator insertion was referred to our institution for the treatment of critical limb ischemia presenting as rest pain in the left foot (Rutherford category 4). Duplex ultrasonography and confirmatory angiography revealed a long occlusion from the proximal superficial femoral artery to the popliteal artery (Figure 1A). Although the femoropopliteal artery occlusion was successfully recanalized with nitinol stents (Figure 1B), substantial contrast stains were visualized in the left upper calf and ankle (Figure 1C). His foot pain resolved with a significant improvement of ankle-brachial index, from 0.33 to 0.88. However, a couple of days later, severe painful swelling occurred in the left upper calf and ankle (Figure 1D). Contrast-enhanced computed tomography revealed a cystic lesion with ring enhancement in the left calf consistent with calf swelling, suggesting

hematoma (Figure 1E). Magnetic resonance imaging revealed abnormal intensity in the left lateral condyle of the femur, tibia, and calcaneus, suggesting malignant bone tumors (Figures 1F and 1G). Bone scintigraphy revealed multiple abnormal accumulations of gallium-67 citrate in the left iliac crest, knee, and ankle, suggesting multiple bone metastases (Figure 1H). Following consultation with an orthopedic oncologist, pathological biopsy of the tibia demonstrated evidence of adenocarcinoma. These findings suggested metastatic bone adenocarcinoma of unknown primary origin. With the support of a palliative care program, the patient died after 2 months.

In this case, occult malignant disease in the leg developed following femoropopliteal artery revascularization. We emphasize the need to be aware of the potential for malignant disease in the setting of critical limb ischemia.

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FIGURE 1 Clinical Course Before and After Femoropopliteal Artery Revascularization

(A) Baseline angiography showing a long occlusion from the proximal superficial femoral artery to the popliteal artery. **(B)** After successful revascularization with 2 nitinol stents (6.0 mm × 200 mm and 6.0 mm × 170 mm), final angiography revealed an excellent result. **(C)** After femoropopliteal recanalization, substantial contrast stains were observed in the upper calf and ankle (**arrows**). **(D)** Remarkable swelling of the left calf and ankle developed after femoropopliteal artery stenting. **(E)** Contrast-enhanced CT (axial image) revealed a cystic lesion with ring enhancement in the calf, suggesting hematoma (**arrows**). **(F)** Magnetic resonance imaging (sagittal image) of the below-the-knee segment revealed abnormal intensity in the lateral condyle of the femur and tibia (**arrowheads**) as well as hematoma in the calf (**arrows**). **(G)** Magnetic resonance imaging (sagittal image) of the heel revealed abnormal intensity in the calcaneus (**arrowheads**). **(H)** Gallium-67 citrate scintigraphy showed multiple abnormal accumulations in the left iliac crest, knee, and ankle (**arrows**).

REFERENCE

1. El Sakka K, Gambhir RP, Halawa M, Chong P, Rashid H. Association of malignant disease with critical leg ischaemia. *Br J Surg* 2005;92:1498-501.

KEY WORDS bone metastases, critical limb ischemia, vascular oncology