

## This Little Piggy Went Bye Bye

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A 40-year-old woman is admitted to the internal medicine teaching service with severe left foot pain. Her past medical history includes hypertension, peripheral arterial disease, type 2 diabetes mellitus, end-stage renal disease requiring hemodialysis, and a double lung transplant for cystic fibrosis. About five months ago, the patient was admitted for similar symptoms in her right foot with a resultant amputation right below the knee. The patient describes the pain in her left foot as constant and burning in nature. On exam, the left lower extremity is cool to the touch and hairless with weak dorsalis pedis and posterior tibial pulses. The left first and second toes are dry, ulcerated, and black with necrotic and gangrenous tissue as shown in Figure 1.

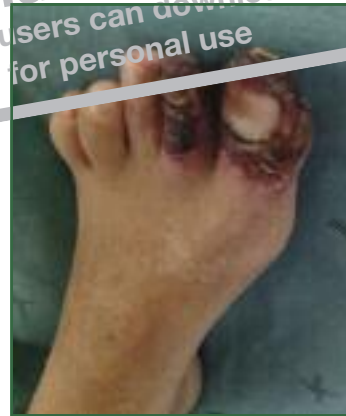


Figure 1: Dry, Ulcerated, and Black Toes with Necrotic and Gangrenous Tissue

### What is your Diagnosis?

This patient exhibits digital ischemia with necrosis and dry gangrene of the first and second digits on the left foot. The patient had several risk factors for peripheral arterial disease (PAD), including long-standing, poorly-controlled diabetes mellitus, hypertension, and end-stage renal disease requiring hemodialysis. The prevalence of PAD is highest amongst patients over the age of 40 and in those with the above-mentioned risk factors. The lower extremities are disproportionately involved; however, involvement of the upper extremities in diabetic patients portends poor overall survival. In the diabetic patient, the foot is at particular risk due to the presence of peripheral neuropathy and resultant deformity, vascular insufficiency, and an increased risk for infection.

The differential diagnosis for limb ischemia includes both chronic and acute causes. Progression of chronic atherosclerosis is the most common etiology. Acute causes include thromboembolic disease, arterial injury and dissection, vasculitis, and paraneoplastic syndromes.

Ideally, prevention is best. Treatment of acute limb ischemia can range from emergent thrombolysis and vascular stenting to surgical bypass grafting and limb amputation. Treatment of a necrotic and gangrenous limb involves managing associated pain and preventing limb infection. Once the involved area is well-demarcated, surgical amputation is often the treatment of choice and efforts are aimed at salvaging viable tissue. Occasionally, autoamputation is the chosen treatment modality.

The patient in this case underwent a below the knee amputation with no complications. The treatment decision was based on angiographic studies and recent experience in managing the ischemic changes in her right lower extremity. The patient developed worsening respiratory function weeks later and died in hospital.

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