



BY JARROD SHAPIRO, DPM

# Reductio Ad Absurdum

Evidence and logical thought ultimately prevail.

*Practice Perfect is a continuing every-issue column in which Dr. Shapiro offers his unique personal perspective on the ins and outs of running a podiatric practice.*

plantar fasciitis as the diagnosis of a patient’s heel pain, do you actually need to obtain radiographs? This resident, like many of us, was

ized that many physicians make this diagnosis off of a proper history and physical, so perhaps radiographs weren’t necessary during an

The title of this *Practice Perfect* column sounds like something from a Harry Potter fantasy movie, but, perhaps unfortunately, this is a real world concept. We’ll get to the meaning and how it applies to patient care in a minute.

The other day, during an academic session, a resident asked a very good question: “If you suspect

initially trained to order three-view weight-bearing radiographs of all patients complaining of heel pain.

However, after gaining further training and experience, he real-

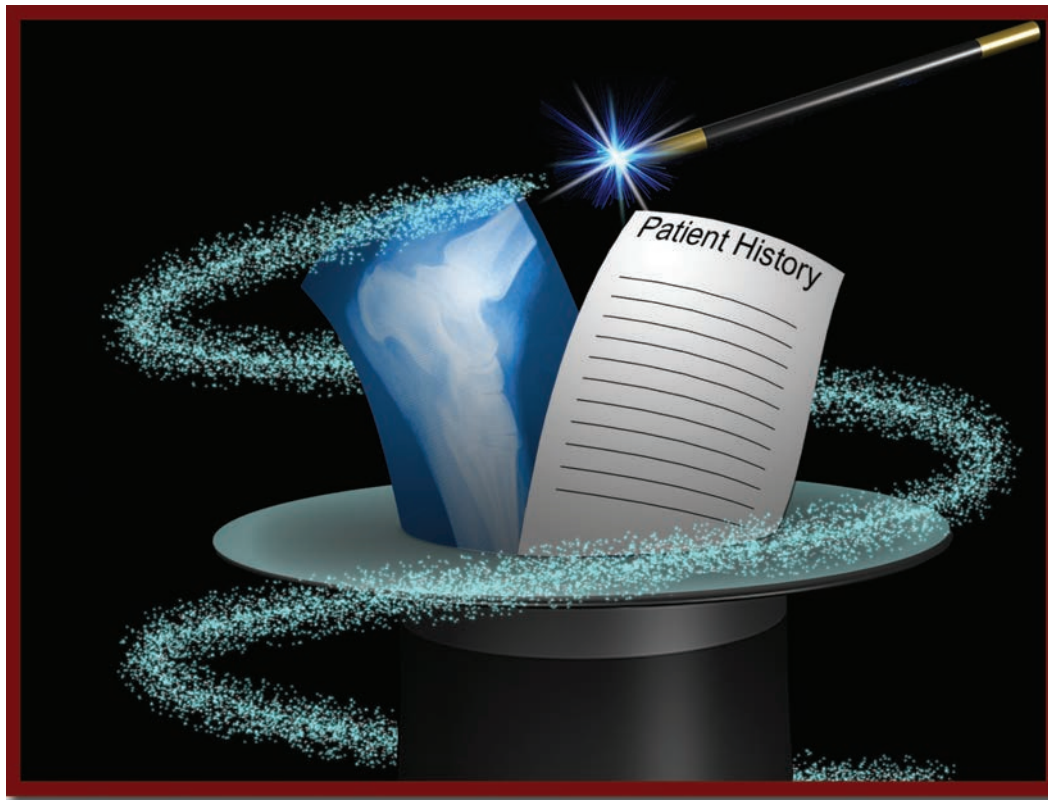
initial patient encounter. So, as we do during these sessions, we had a discussion about this controversy with another resident in the opposing camp. “I want to make sure

I’m ruling out the other important diagnoses,” stated the contrasting resident.

In came reductio ad absurdum to add a little mental fuel to the fire. Reductio ad absurdum is a Latin philosophical term that means “reduction to absurdity.” When using this argument, one attempts to show that a statement is false because it inevitably leads to an absurd conclusion.

If one states we should order radiographs for every new heel  
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*Absurdum* (from page 35)

pain patient to “rule out other differential diagnoses”, then the next step is to ask, “Should we then order an MRI to rule out a symptomatic bone cyst?” And, “should we then order a bone scan to rule out a stress fracture?” Then, “should we now order nerve conduction studies to rule out a lumbosacral radiculopathy?” Wouldn’t these tests rule out “other differential diagnoses”? To that end, maybe we should also order glycosylated hemoglobin and HLA-B27 to rule out diabetes and reactive arthritis, respectively, as causes of heel pain. That would be absurd.

Exactly. *Reductio ad absurdum*. Of course we shouldn’t order all those tests. First, it would be prohibitively expensive to do this kind of testing. Second, the larger number of tests ordered would lead to a greater chance we would find a false positive result and potentially put the patient through unnecessary treatment. Third, it’s unnecessary, since we have a better alternative: our logical thought processes and research evidence.

Let’s ask this question: Are radiographs necessary to diagnose patients with plantar fasciitis? A quick search brought up a retrospective co-

hort study by Levy and colleagues in 2006.<sup>1</sup> They compared the chart information and radiographs of 157 consecutive patients (215 feet) with non-traumatic heel pain. These researchers used this information to

a detailed history and physical examination to drive diagnosis and treatment. Laboratory and imaging data are used to confirm diagnoses when needed and in situations where more information is necessary. Evidence

**When working up initial presentations of heel pain, radiographs should be reserved for patients who do not improve as expected or present with an unusual history or confounding physical findings.**

see if the radiographs changed the working diagnosis or treatment plan. As you can imagine, the radiographs changed the diagnosis or plan in exactly ZERO patients.

Their conclusions were: “Routine radiographs are of limited value in the initial evaluation of non-traumatic plantar heel pain in adults and were not necessary in the initial evaluation. Radiographs should be reserved for patients who do not improve as expected or present with an unusual history or confounding physical findings.”

The authors, here, reiterate one of the fundamental concepts of the modern practice of medicine: obtain

and logical thought is all we need for the vast majority of pathology affecting the lower extremity, much less that of the rest of the body.

To do anything else would be to practice “*medicinae ad absurdum*.” **PM**

**Reference**

<sup>1</sup> Levy JC, Mizel MS, Clifford PD, et al. Value of Radiographs in the Initial Evaluation of Nontraumatic Adult Heel Pain. *Foot & Ankle Int* June 2006; 27(6):427-430.

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