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The All-Important Thought Process

Are you going through the proper steps?

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

For the clinical podiatrist, nothing is more important than the thought process. Having a reason for treatment decisions you make is pivotal to proper patient care. Yet despite this seemingly obvious statement, it's surprising to see the number of errors made by experienced clinicians and trainees alike. From students, you see this exemplified by responses to questions using rote memorization or referring to what they have previously seen by other providers. This makes sense since young podiatrists in training don't have a lot of experience to fall back on. Unfortunately, we can't say the same for veteran doctors.

Like many of you reading this, you've seen lots of patients over the years for second opinions or subsequent treatment of patients, and there's no shortage of thought process errors (my own included). There are several reasons why this occurs with experienced providers. Simple incompetence is relatively common. In fact, this is the most common thought process error you see from non-podiatric physicians. Just because someone is an MD or DO doesn't mean they understand how to treat the foot. For example, it's common to see heel pain patients whose primary care doctor obtained non-weight-bearing radiographs and told them their spur is the cause. That's a simple lack of knowledge about plantar fasciitis/fasciosis.

A lack of time is also a common cause of mistakes. It's well known that decisions made under pressure without time for careful consideration increases the risk of errors. This is increasingly common in private practice during which we are forced to see increasing numbers of patients in response to income demands in the face of declining reimbursement. Misjudgments have been made in the past due to these pressures, and you need to fight it by reviewing your surgical cases carefully before surgery to check yourself and participate in your residency program's academics where you present various cases for discussion.

Figure 1

Except for pure incompetence, all the other mistakes in treatment are due to some thought process errors. This is the reason for writing so extensively about the topic. Unfortunately, many of our young trainees fail to develop this skill during school, which was noticeable during the recent residency interviews.

To test this most important skill during the CRIP, the residency program's interview content was changed to focus heavily on decision-making. Unfortunately, several interviewees fell a little short of the mark. To help our trainees understand this, let's discuss three short cases to highlight where more work needs to be focused.

Case 1: The Fracture That Didn't Need ORIF

Look at the radiograph of the extra-articular nondisplaced 5th metatarsal avulsion fracture (Figure 1). We asked applicants in the interview this question: "How would you treat this? What factors are you considering?" It's an open-ended question that does not push students toward a surgical plan.

Since we deliberately kept the provided information to a minimum, we eliminated the need to

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consider patient historical factors. To answer this question correctly, students would have need to know the basics of 5th metatarsal base fractures (avulsion versus Jones, basic anatomy) and an understanding that these fractures do NOT need surgery. Weight-bearing or non-weight-bearing immobilization in a walking boot is sufficient to heal this fracture. If students mentioned this thought process, they would have been correct. Clearly, one would have needed to know the basic principles without which the correct thought process couldn't have occurred.

Case 2: The Bunionectomy That Shouldn't Have Been

For this case, we asked applicants the following question: "Two years after a bunionectomy, this patient continues to have dorsal and medial 1st MTPJ pain (Figure 2). What procedure was done and how would you address this?" Before reading further, how would you have answered this question?

This case elucidates my point above that even experienced doctors can make the wrong decisions, as occurred with this patient. Some basic skill in reading and interpreting radiographs is necessary to answer the question, as is a basic understanding of bunions. Remember, foundational knowledge must come before thought process. A student would have to be able to interpret the radiograph correctly and see that a Silver bunionectomy had been performed. It's much harder to tell if an actual osteotomy occurred, and the student wouldn't have been downgraded if they weren't sure.

Figure 2

To address this surgically (we'll skip the non-operative options for the sake of space), a student would have had to, again, interpret the radiograph and note the lack of metatarsus primus elevates, the lack of intermetatarsal angle correction, and the slightly narrow but mostly intact 1st MTP joint, among other findings. Several correct surgical options are available and might include, for example, a distal metatarsal osteotomy, 1st MTPJ fusion, or Lapidus bunionectomy. If the thought process included a recognition of the important factors and a solid reason for choosing one of these procedures, then the student would have been correct.

Case 3: Very Flat!

Finally, for our last example case, we asked the question "You've diagnosed this patient with adult acquired flatfoot (Figure 3). Based on the radiographs, what procedure(s) would you choose and why? What factors do you consider when making your surgical decision?" Clearly this question is looking for an organized thought process.

Now, an important factor to consider in this case is the lack of detail and limited information. For example, a history and physical examination are mandatory before making an informed decision about the treatment of progressive collapsing foot deformity. But since we're asking the question, we get to leave out the details and see where you go!

Most of the answers we received from our interviewees were simple regurgitation of named procedures (common choices were Evans and medial displacement calcaneal osteotomy) without any actual justification. At the very least, an explanation that the midtarsal joint is abducted (increased calcaneocuboid angle and talar head uncovering) would have been a good start.

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A student who explained more of the biomechanics of this disorder with discussion about loss of the spring ligament, degeneration of the posterior tibial tendon, and the tri-planar nature of the deformity (including a possible residual forefoot supinatus/varus) would have explained their procedure choices in a much more sophisticated manner.

As in all things, there's very little black and white "one-answer-fits-all" to this, and in most cases, more than one correct choice is possible. But without some organized underlying thought process, a rational decision is really not possible.

Conclusions and Recommendations

For any students and residents out there reading this, here are some suggestions for your studies:

Base your primary studies on the patients that you see in clinic, surgery, and the hospital.

1) Double-check yourself to make sure you understand the basics of the disease you're dealing with, the fundamentals. Do you know the pathomechanics, anatomy, and pertinent information? Remember, foundation is the first step to thought process.

2) Consider how you would treat your patient if you were the attending physician. Can you choose a treatment option and explain why you've chosen that treatment? Can you verbalize your reasoning and the factors that you considered? Do NOT think, "I'm choosing this because I saw Dr X do it."

3) Compare your choice to your attending. How close did you come? Can you account for differences? Discuss your decisions and thought process with that attending so you can more fully understand their decision process.

Repeat this process during your entire training, reading additional research articles and textbooks as you go to build both your knowledge base and hone your decision-making process. Be rigorous about your studies. Constantly questioning what you experience will squeeze the educational juices out of your training to benefit both yourself and your future patients. **PM**

Figure 3

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