

CHRONIC EXERTIONAL COMPARTMENT SYNDROME

I enjoyed reading the article "Chronic Exertional Compartment Syndrome in a Collegiate Soccer Player: A Case Report and Literature Review" by Drs. Farr and Selesnick (*Am J Orthop.* 2008;37[7]:374-377). However, I do take some exceptions to the authors' comments.

First, I think the history (supplemented by the usual almost total absence of findings on the exam) is sufficient to justify compartment manometrics without obtaining more costly magnetic resonance imaging (MRI), electromyography/nerve conduction studies (EMG/NCS), and nuclear medicine studies beforehand.

Second, I recommend using an exercise challenge that conforms to what the patient says causes his/her symptoms rather than a "standard" treadmill protocol. For example, I had a patient with the nephrotic syndrome who developed chronic exertional compartment syndrome (CECS) symptoms after walking 75 feet. A fasciotomy resolved her CECS symptoms. A 15-minute run on a treadmill would have likely precipitated a cardiac event. Conversely, I have had college track runners who required 45 minutes of "hard" running before their CECS symptoms were manifested.

Third, I think CECS examiners are remiss in their responsibilities if they do not pair the patient's subjective percep-

tion of pain (using a [0 = no pain] to [10 = excruciating pain] scale) with compartment pressure measurements. This has saved my patients multiple "sticks" with the 19-gauge vented Stryker needles (Stryker Corporation, Kalamazoo, Mich). For example, a recent (markedly obese) patient judged the pain to be 5 (interfered with activities) in the anterior and posterior compartments of both legs after walking for 20 to 30 minutes. At the time of compartment pressure measurements, the symptoms were rated 2 (ie, the patient had to think about them to notice the pain). Resting pressures in the two compartments were more than twice the upper limits of normal. From this information, I felt comfortable in recommending staged bilateral four-compartment leg fasciotomies while minimizing the needlesticks to two.

I have co-authored an article (with one of my patients, who is now an anesthesiologist and has resumed her half marathon runs after bilateral anterior compartment fasciotomies) which explains how I use perceived pain with manometrics to maximize the decision-making process and minimize the number of "sticks" the patient must experience. (Strauss MB, Wakim N. Patient perception pinpoints exertional leg pain. *BioMechanics.* 2002;9[10]:63-77.)

Michael B. Strauss, MD
Long Beach, CA

(Author's Response on page 592)

2008 Resident Writer's Award

The 2008 *Resident Writer's Award* competition is sponsored through a restricted grant provided by DePuy, a Johnson & Johnson company. Orthopedic residents are invited to submit original studies, reviews, or case studies for publication. Papers published in 2008 will be judged by *The American Journal of Orthopedics* Editorial Board. Honoraria will be presented to the winners at the 2009 AAOS annual meeting.

\$1,500 for the First-Place Award

\$1,000 for the Second-Place Award

\$500 for the Third-Place Award

To qualify for consideration, papers must have the resident as the first-listed author and must be accepted through the journal's standard blinded-review process.

Papers submitted in 2008 but not published until 2009 will automatically qualify for the 2009 competition.

Manuscripts should be prepared according to our Information for Authors and submitted via our online submission system, Editorial Manager®, at www.editorialmanager.com/AmJOrthop.

Through a restricted grant provided by

