

## Chest pain and panic disorder in the ED: one of the authors responds to Epstein's letter

*To the Editor:* In our recent article<sup>1</sup> we did not intend to target or blame ANY particular group of physicians for failure to recognize panic disorder (PD).<sup>2</sup> Our hope was to increase awareness of this problem and to promote better integration of health care services to our community. We agree that, given repeated exposures to their patients, family physicians (FPs) have a greater opportunity than emergency physicians to diagnose PD. It is our belief that FPs are doing an increasingly better job at diagnosing and treating anxiety and mood disorders; however, in these times of outrageous FP shortages, it is a mistake to assume that most or all patients have a family doctor.

There are several reasons why patients with PD end up in the emergency department (ED), and one of them is the difficulty in seeing a family doctor. In addition, panic attacks are dramatic and composed mainly of physical symptoms — especially cardiovascular symptoms. The role of the ED physician is not only to rule out deadly illness, but to arrive at a comprehensive differential diagnosis and adequate referral. The diagnosis of PD should be included in the diagnostic algorithm of chest pain.

We sympathize with ED physicians: they are overburdened because the rest of the system is. Yet ED doctors are often confronted by patients with PD — perhaps more often than any other group of physicians. By arriving at a probable diagnosis and arranging appropriate follow-up, they have the opportunity to prevent the evolution of PD from an acute to a chronic condition. While we agree with Dr. Epstein

that greater efforts are needed to improve PD detection in family practice, we specifically targeted ED physicians because this study was conducted in the ED. We are flattered that he thinks this paper should be distributed to FPs. Thank you.

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### References

1. Fleet RP, Lavoie KL, Martel JP, Dupuis G, Marchand A, Beitman BD. Two-year follow-up status of emergency department patients with chest pain: Was it panic disorder? *Can J Emerg Med* 2003;5(4):247-54.
2. Epstein NL. Chest pain and panic disorder in the ED? [letter]. *Can J Emerg Med* 2003;5(5):308.

## Epinephrine in digital blocks: refuting the refutation of dogma

*To the editor:* While it is always reasonable to question dogma, I am not satisfied that local anesthetics with epinephrine are safe for use in fingers, toes, ears, the penis and the tip of the nose. I was not surprised when Dr. Katis stated<sup>1</sup> that he could not find any citations where digital blocks with epinephrine have caused a problem. In every modern textbook it is still considered a contraindicated application; therefore, it'd be a very brave physician who would report such a case.

Dr. Katis disregarded articles that reported complications from direct epinephrine injection into a digit. I suggest these articles would have been relevant because direct injection into other areas

— such as the arm or thigh — generally does not cause complications. One such article,<sup>2</sup> published in *CJEM*, is of particular note: “Accidental injection of epinephrine by a child: a unique approach to treatment.” Appended to this article was an Editor's Note (p. 36). It stated: “Although these authors specifically address the issue of epinephrine-injector injury, the therapy they describe is probably widely applicable to patients who undergo inadvertent digital injection of local anesthetic with epinephrine, which is a much more frequent ED occurrence.”

We must decide in which situations the use of epinephrine would justify a potential increase in risk to the patient. In most cases involving digital repair in the ED it is completely unnecessary.

In the rare situation where epinephrine might be useful — perhaps to prevent a trip to the operating room — the patient must be informed of the risks because this treatment is outside the realm of standard care. The physician should be prepared to use rescue drugs such as phentolamine or terbutaline if the need arises.

### Meite Moser, MD

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### References

1. Katis PG. Epinephrine in digital blocks: refuting dogma. *Can J Emerg Med* 2003; 5(4): 245-6.
2. Sellens C, Morrison L. Accidental injection of epinephrine by a child: a unique approach to treatment. *Can J Emerg Med* 1999;1(1):34-6.

## [The author responds:]

Dr. Moser raises some important concerns. The studies to date suggest an absence of harm, and I agree that this does not equate with proof of safety.

My contention is that the commonly espoused belief that epinephrine cannot be used with lidocaine in digital blocks is not supported by the medical literature and that, in fact, the weight of evidence argues in favour of its use.

Secondly, the article that Dr. Moser cites as evidence of complications from direct epinephrine injection into digits describes the accidental injection of an adult dose of epinephrine from an auto-injector syringe (used to treat allergic reactions) into the thumb of a child.<sup>2</sup> This scenario differs from the use of lidocaine-epinephrine formulations for local anesthesia. The typical adult epinephrine auto-injector device delivers 0.3 cc (0.3 mg) of 1:1000 epinephrine. In contrast, lidocaine and epinephrine formulations used for local anesthesia contain epinephrine in a concentration of 1:100000. If 1 cc of anesthetic is used in a digital block, the delivered epinephrine dose is 0.01 mg, and if 5 cc is used (as in the clinical trials), this is 0.05 mg of epinephrine. The epinephrine dose delivered by an auto-injector is, therefore 6–30 times higher. In fact, 30 cc of local anesthetic would need to be infiltrated into a finger to achieve the same dose as the adult auto-injector.

As to the contention that epinephrine

is unnecessary in most cases involving digital repair in the ED, I would agree. The reason I use it in practice is because it makes my job easier. I rarely require a tourniquet, the blocks last longer, and I am always reassured by the preservation of capillary refill to the finger. In the unlikely event that ischemia occurs, Dr. Moser correctly mentions phentolamine or terbutaline as rescue drugs. To date, I have not had reason to use either.

#### **Peter Katis, MD**

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#### **References**

1. Katis PG. Epinephrine in digital blocks: refuting dogma. *Can J Emerg Med* 2003;5(4):245-6.
2. Sellens C, Morrison L. Accidental injection of epinephrine by a child: a unique approach to treatment. *Can J Emerg Med* 1999;1(1):34-6.

#### **SARS**

*To the Editor:* In the September issue of *CJEM*, the CAEP Position Statement, “Implications of the SARS outbreak for Canadian emergency departments,” states in Recommendation 9

(p. 347) that “Ontario has mandated 24/7 triage staffing by appropriately trained nurses, and this should become a national standard.”<sup>1</sup> Although this is a laudatory goal it is important to point out that other trained health care professionals also perform triage in emergency departments in this country. In Halifax, our single tertiary care institution (Queen Elizabeth II Health Sciences Centre/Capital Health) has had paramedics performing triage (successfully) for over 10 years.<sup>2</sup> The goal remains the same: rapid, safe standardized triage by trained health care professionals.

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#### **References**

1. Ovens H, Thompson J, Lyver M, Murray MJ, Innes G, on behalf of the Canadian Association of Emergency Physicians (CAEP). Implications of the SARS outbreak for Canadian emergency departments [position statement]. *Can J Emerg Med* 2003;5(5):343-7.
2. Cook S, Sinclair D. Emergency department triage: a program assessment using the tools of continuous quality improvement. *J Emerg Med* 1997;15(6):889-94.

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