

In 2005, the American Society of Clinical Oncology offered guidelines to establish the indications for sentinel lymph node biopsy based on scientific data.² The authors of the study state that lymphatic drainage from the upper portions of the breast should be intact after breast implants, particularly when the surgery has been performed more than 6 months earlier. Despite this statement, the authors report that more studies of sentinel lymph node detection are required before guidelines can be recommended.

Given the overall lack of consensus and paucity of literature, we performed a prospective study analyzing sentinel lymph node detection through comparative preoperative and postoperative lymphoscintigraphy in transaxillary breast augmentation patients.³ The results demonstrated a focal accumulation of radioactivity in 93 percent of the patients, where the “hot spots” identified corresponded to the same axillary region observed in the preoperative situation. In two patients (three axillae), sentinel lymph node identification was unsuccessful, but no statistical differences were observed. This divergence may be explained by lymphatic rupture secondary to axillary undermining or a transitory interruption as a result of edema compression.

The results of our study indicated that the subfascial transaxillary breast augmentation technique did not totally disrupt the lymphatics in the majority of patients. However, it is important to respect the technique’s concepts,^{3,4} which are to remain high and anterior in the axilla within the subfascial plane, to perform the dissection with gently sweeping maneuvers, and to minimize the pocket undermining in the lateral aspect of the breast.⁴

Although transaxillary breast augmentation has become an increasingly common technique for breast augmentation and oncologic surgeons have gained more practice with sentinel lymph node detection, the consequences of combining both actions remain controversial. Although many questions about cancer in the augmented breast remain unanswered, our study suggests that sentinel lymph node detection is feasible.³ We believe that additional studies and larger clinical series are required to study the accuracy of sentinel lymph node biopsy in subgroups of breast cancer patients with previous breast implants.

DOI: 10.1097/01.prs.0000279459.77292.be

Alexandre Mendonça Munhoz, M.D.

Breast Reconstruction Group
University of São Paulo—Brazil

Cláudia Maria Aldrighi, M.D.

Breast Surgery University of São Paulo School of Medicine
São Paulo, Brazil

Correspondence to Dr. Munhoz
Division of Plastic Surgery
University of São Paulo School of Medicine
Rua Oscar Freire 1702 ap. 78
São Paulo 05409-011, Brazil
munhozalex@uol.com.br

REFERENCES

1. McCarthy, C. M., Pusic, A. L., Disa, J. J., Cordeiro, P. G., Cody, H. S., and Mehrara, B. Breast cancer in the previously augmented breast. *Plast. Reconstr. Surg.* 119: 49, 2007.
2. Lyman, G. H., Giuliano, A. E., Somerfield, M. R., et al. American Society of Clinical Oncology guideline recommendations for sentinel lymph node biopsy in early-stage breast cancer. *J. Clin. Oncol.* 23: 7703, 2005.
3. Munhoz, A. M., Aldrighi, C., Ono, C., et al. The influence of subfascial transaxillary breast augmentation in axillary lymphatic drainage patterns and sentinel lymph node detection. *Ann. Plast. Surg.* 58: 141, 2007.
4. Munhoz, A. M., Fells, K., Arruda, E., et al. Subfascial transaxillary breast augmentation without endoscopic assistance: Technical aspects and outcome. *Aesthetic Plast. Surg.* 30: 503, 2006.

Epinephrine Use in the Fingers

Sir:

We read with great interest the article entitled “A Critical Look at the Evidence for and against Elective Epinephrine Use in the Finger” by Thomson et al. (*Plast. Reconstr. Surg.* 119: 260, 2007), on the use of epinephrine-containing local anesthetic solutions in fingers. We believe the article scrutinized the existing literature, and the authors’ conclusions are bold but not unexpected. We were surprised to see that our own empirical observations are in total agreement with these conclusions.

Our own clinical experience on the subject commenced 10 years ago, when one of our nurses accidentally used a lidocaine 1% + epinephrine 1:400,000 solution (the standard 2% lidocaine with 1:200,000 epinephrine solution, diluted 1:1 with sodium chloride 0.9%) in all our elective hand operations. When the error was recognized, we were pleasantly surprised with the level of anesthesia achieved and the lack of bleeding in our cases.

We then started using the aforementioned solution of lidocaine 1% with epinephrine 1:400,000, reluctantly, in selected hand cases. Later, when we confirmed the lack of complications, we generalized its use in all hand cases. In fact, we now almost exclusively use this kind of anesthesia for hand cases, over other types of anesthesia (general, regional, local and sedation, and so on).

Of course, in this era of evidence-based medicine, these anecdotal observations, as well as those of other authors, must be confirmed with prospective, double-blind studies.

DOI: 10.1097/01.prs.0000279460.23245.85

Apostolos D. Mandrekas, M.D.

George J. Zambacos, M.D.

Action Plastic Surgery Center
Athens, Greece

Correspondence to Dr. Zambacos
Action Plastic Surgery Center
11 D. Vasiliou Street
N. Psychiko
Athens 15451, Greece

Reply

Sir:

We thank Drs. Mandrekas and Zambacos for their interest in the elective use of epinephrine in the finger and for their confirmation of its safety in their experience. We have heard from several other groups around the world who have also been routinely using adrenaline electively in the finger with no adverse effects.

Our own interest in adrenaline in the hand began with the large clinical experience of excellent Canadian hand surgeons, including Bob MacFarlane, Pat Shoemaker, John Fielding, and Mike Bell, who had a combined experience of well over 100 surgeon-years of elective injection of epinephrine into fingers without a single loss of a digit. There was a clear disconnect between the real experience of these good surgeons and the myth of epinephrine danger in the finger, which is still erroneously taught to many medical students and quoted in some major textbooks.

We confirmed that phentolamine was a reliable and safe reversal agent for epinephrine-induced vasoconstriction in the finger by enrolling 18 Dalhousie University alumni hand surgeons among volunteers to have their own fingers injected with epinephrine and phentolamine.¹ We then undertook a prospective study of 3110 consecutive cases of elective epinephrine injections by nine surgeons in six cities. This study confirmed that not one patient experienced any necrosis, and not even one patient required phentolamine rescue.²

Keith Denkler's landmark article³ showed that there was not one case of lidocaine with epinephrine causing finger infarction in the world literature from 1880 to 2000. This work led us to the discoveries in our current article, which indicate that the likely source of the epinephrine myth was degenerated acidic procaine.

Why is this topic a very important one? We were first interested in elective use of epinephrine in the finger so we could operate on these patients under pure local anesthesia. The main goal was to avoid the tourniquet, anesthesiology, and dependency on main operating rooms, which can be difficult to access in Canada. We then found other important benefits, which included improving the results of our hand surgery team by communicating with pain-free (tourniquet-free) patients during surgery and having them actively move reconstructed structures so that adjustments could be made before the skin was closed. This has been particularly helpful in tendon repair, tendon transfer, tenolysis, finger fractures, and so on. We no longer have to subject older hand patients with medical problems to the risks of sedation. We have also found it much cheaper and much more comfortable for patients to have tourniquet-free carpal tunnel and trigger finger releases in the clinic or office outside the main operating room.

Almost all of our hand surgery procedures are now performed with the patient under pure local anes-

thesia, with no tourniquet and no sedation (wide awake approach), outside of the main operating room with field sterility. For much of the world that cannot afford the expense of a main operating room and general anesthesia, this approach will be a major step forward for hand surgery.

DOI: 10.1097/01.prs.0000279468.01557.9b

Donald H. Lalonde, M.D., M.Sc.

Christopher James Thomson, M.D.

Keith Denkler, M.D.

Anton Feicht, Ph.D.

Division of Plastic Surgery
Queen Elizabeth II Health Sciences Center
Dalhousie University
Halifax, Nova Scotia, Canada

Correspondence to Dr. Thomson

243 Sheppards Run
Beechville, Nova Scotia B3T 2G2, Canada
ctdalplastics@yahoo.com

REFERENCES

1. Nodwell, T., and Lalonde, D. H. How long does it take phentolamine to reverse adrenaline induced vasoconstriction in the finger and hand? A prospective randomized blinded study: The Dalhousie Project experimental phase. *Can. J. Plast. Surg.* 11: 187, 2003.
2. Lalonde, D. H., Bell, M., Benoit, P., et al. A multicenter prospective study of 3110 consecutive cases of elective epinephrine use in the fingers and hand: The Dalhousie Project clinical phase. *J. Hand Surg. (Am.)* 30: 1061, 2005.
3. Denkler, K. A. Comprehensive review of epinephrine in the finger: To do or not to do. *Plast. Reconstr. Surg.* 108: 114, 2001.

The Evidence for and against the Effectiveness of Pressure Garment Therapy for Scar Management

Sir:

With regard to the recently published article entitled "Review of Over-the-Counter Topical Scar Treatment Products,"¹ the authors should be commended. This is an extremely important topic, as virtually every plastic surgery patient receives advice regarding scar management. The myriad of products available and the lack of high-quality scientific evidence make it difficult to provide exact advice.

The aim of Shih et al.'s article was "to evaluate the evidence from published controlled clinical trials in humans on some of the most commonly used over-the-counter products for treatment of symptomatic scars." The article states, "retrospective clinical and ultrasonic studies since the 1960s are supportive" of pressure therapy. However, of the references provided, none is a clinical study providing evidence of improved outcomes with the use of pressure garment therapy. All are case studies of patients treated with pressure therapy, and none has a comparison group or control treatment.

The article goes on to state that "the only prospec-