2010 ASSH Annual Meeting
Embracing Excellence: Making a Difference

Instructional Course 29

Friday, October 8, 2010
4:30 – 6:00 PM
Room: 309, Hynes Convention Center

The Wide Awake Approach to Hand Surgery

Chair:
Donald H. Lalonde, MD

Wide Awake Hand Surgery

Dr Don Lalonde, Professor Surgery, Dalhousie University
Saint John, Canada
ASSH Boston 2010
Consultant ASSI instruments

- Wide awake hand surgery reduces the experience of 95% of hand surgery to the level of going to the dentist from the patient's perspective
- There is no tourniquet, no sedation
- Only lidocaine with epinephrine is injected in large volumes wherever you are going to cut to provide anesthesia and hemostasis
- The danger of epinephrine in the finger has now been clearly disproven, and phentolamine can reverse epinephrine induced vasoconstriction as an antidote (1mg phentolamine in 1-10cc of saline)(1-5)
- The wide awake approach can be used for most common hand operations such as carpal tunnel, trigger finger, flexor and extensor tendon repair, tendon transfers, palmar fasciectomy, finger fusion, trapeziectomy, elbow ulnar nerve release/transposition, and operative reduction of finger and hand fractures.
- Surgeons in all major Canadian cities are now using the wide awake approach
- It is a major advantage for the surgeon to be able to intraoperatively watch a comfortable pain free, tourniquet free patient move the reconstructed structures before the skin is closed so that adjustments can be made to achieve a better result.
- In flexor tendon repair, testing of the repair with active movement will sometimes show a gap between the two tendon ends because the suture is not tied tightly enough. Gapping would lead to rupture after surgery, but it can be corrected with additional sutures *before* the skin is closed. It is better to see a gap during the repair when it can still be fixed than after the surgery when it will cause a tendon rupture. With intraoperative active movement, it can become obvious that a bulky repair will not be able to fit through the sheath. This problem can be addressed before the skin is closed by additional epitenon suturing to smooth out the triggering bump of tendon, or by dividing pulleys to allow the repair to get through the pulleys.(6)
- Wide awake carpal tunnel is great for patients (7)

Notes

1) Nodwell T, Lalonde DH. 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 2003;11(4) 187.

2) Thomson CJ, Lalonde DH, Denkler KA. A critical look at the evidence for and against elective epinephrine use in the finger. Plast Reconstr Surg 2007;119(1):260.

3) Lalonde DH, Bell M, Benoit P. A multicenter prospective study of 3,110 consecutive cases of elective epinephrine use in the fingers and hand: the Dalhousie project clinical phase. J Hand Surg 2005;30(5):1061.

4) Fitzcharles-Bowe C, Denkler KA, Lalonde DH. Finger injection with high-dose (1:1000) epinephrine: Does it cause finger necrosis and should it be treated? HAND 2007;2(1):5.

5) Williams JG, Lalonde DH. Randomized comparison of the single-injection volar subcutaneous block and the two-injection dorsal block for digital anesthesia. Plast Reconstr Surg 2006;118(5):1195.

6) Lalonde DH. Wide-awake flexor tendon repair. Plast Reconstr Surg 2009;123(2):623.

7) http://www.vumedi.com/node/103023 wide awaked carpal tunnel VuMedi

8) Lalonde DH. Tendon transfers in unsedated patients. Plast Reconstr Surg 2008;121(2):688.

Reply.