

## Cutaneous Nerves under Ultrasound in Regional Anesthesia: It is about Time that we look Closer into the Fat Pockets

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In recent years there has been a renewed interest in regional anesthesia not only due to increased awareness for safety during anesthesia but also due to the changing surgical practices and working environments, aiming for early discharge and better pain relief.

Ultrasound guided regional anesthesia, especially peripheral nerve blockade is gaining wide popularity among anesthetists. This is due to the fact that it significantly shortens block performance time and reduces the number of needle passes to reach the target in all comparative studies. The occurrence of paresthesia is also reduced, but there is no published evidence of decreased short-lasting postoperative neuropraxia. On top of that current evidence does not suggest that use of ultrasound improves success of regional anesthesia versus most other techniques. However, ultrasound was not inferior for efficacy, did not increase risk, and offers other potential patient-oriented benefits. Unfortunately published reports of RCTs provide little evidence to formulate recommendations regarding the use of adjunctive US and stimulating peri neural catheters. In our opinion the main factor is that ultrasound is still in early days for most of the anesthetists, inclusive of the "so called" experts in the technique. It would be interesting in future issues of this magazine to address such a statement.

Accidental nerve injury other than the nerve that has been aimed to block is a possibility, but a rare occurrence during the procedure, but is this really true? It is well recognized within all the experts groups around the world that an outstanding knowledge of anatomy is required before reaching such a conclusion; therefore our approach is to promote education and training in this subject. Cross section anatomy, understanding of ultrasound basic principles and optimization of the images are vital in this approach.

Let's take an example: Effective brachial plexus blockade requires a thorough understanding of the anatomy of the plexus, as well as an appreciation of anatomic variations that may occur. The ability to explore anatomy at the bedside, with real-time ultra sonography, have improved our appreciation of brachial plexus anatomy as well, and

this is mainly because ultrasound machine have become portable and affordable, something not possible 10 years ago.

When it comes to the benefits of this technique in clinical practice we know that following surgical procedures there are multiple sequelae but one of the most common ones is the chronic pain [1], associated with the formation of small neuromas. These neuromas or trapped nerves need to be excised or treated in many different ways. Chronic pain and sensory disturbances are associated up to 15% of all the hernias [2], repairs to give an example and the same percentage applies to carpal tunnel releases. The ability to locate cutaneous nerves and neuroma formation, not possible until today, makes this a new specialist's field to treat these disturbances. The OMICS Publishing Group will become with its first issue of this magazine a reference for such technique, where professional will seek original information and data. We welcome the success of this magazine. We will be presenting here a new approach into ultrasound regional anesthesia [3], and pain management. Until now people were looking for nerve looking structures in between muscles and tendons but never sensitive nerves. The reason for that was that the source of training was cadaveric specimens and in those the fat is usually removed and that means the three dimension references with them. We realized that the sensitive nerves run inside that fat, in what we called "fat pockets". Looking superficially, into the fat now we can see branches as small as 0.4 mm in diameter and that means that we can be very precise in our local anesthetic volumes delivered close to the targets that are important for a surgical field. Bearing this in mind it is time to realize that the answer to many things is in the small print.

### References

1. Macrae WA (2008) Chronic post-surgical pain: 10 years on. *Br J Anaesth* 101: 77-86.
2. Robert E Condon (2001) Groin Pain after Hernia Repair. *Ann Surg* 233: 8.
3. Marhofer P, Chan VW (2007) Ultrasound-Guided Regional Anesthesia: Current Concepts and Future Trends. *Anesth Analg* 104: 1265-1269.

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