Eyes-hands alignment during regional anesthesia procedures: The US support

To the Editor,

There is great enthusiasm about new technologies applied to regional anesthesia[1] and their ability to solve well known technical issues, such as looking at the patients and at the ultrasound (US) images at the same time during US-guided procedures.[2]

Not by chance, maintaining the eyes-hands alignment of the operator could facilitate the execution of peripheral blocks, especially in case of challenging position or difficult anatomy of the patient.

In our experience, recently developed smartphone connectable wireless probes could be a great solution regarding this matter.[3] US wireless probe have been proven to be reliable in performing invasive anesthetic procedures and vascular cannulations,[4] combining optimal images resolution with the unique convenience of a portable probe, which can be used also in the emergency department and in the wards. Moreover, they are extremely cheaper if compared to traditional US machines, and the images and/or videos can be easily saved on the smartphone, and lately used for teaching purpose.

In our institution, we routinely perform US-guided procedures using smartphone-connected wireless probes combined to a simple flexible neck mobile phone holder, which leaves the operator hands free: we called it the "US support". This device permits to maintain the smartphone directly on the operator ideal eyes-hands line, as shown in Figure 1.

These smartphone supports are very common, cheap and easy to use, and they can be adjusted according to the operator comfort.

It is important to notice that smartphones are integrated part of everyone daily life and work practice, so their use is familiar to almost everyone. Moreover, in contrast to other solution proposed for this matter, such as head-mounted display, which would inevitably split the vision in two,[5] the US support allows the operator to maintain the binocular vison, which could give more confidence during the anesthetic procedure.

Figure 1: Pre-procedural ultrasound scan before IPACK (Infiltration Between Popliteal Artery and Capsule of Knee) block using a smartphone-connected wireless probe. The smartphone is held by a flexible neck mobile phone holder, permitting to maintain the eyes-hands alignment of the operator

New devices and technologies play a fundamental role in the evolution of regional anesthesia, inside and outside the operating room, such as in the emergency department. Adapting them to everyday practice will be a great challenge in the nearby future.

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Conflicts of interest

There are no conflicts of interest.

Alessandro Strumia, Fabio Costa, Giuseppe Pascarella, Felice Eugenio Agrò

Department of Medicine, Unit of Anesthesia, Intensive Care and Pain Management, Università Campus Bio-Medico di Roma, via Álvaro del Portillo, Rome, Italy

Address for correspondence:
Dr. Alessandro Strumia,
Unit of Anesthesia, Intensive Care and Pain Management,
Campus Bio-Medico University and Teaching Hospital,
Via Alvaro del Portillo 200, 00128, Rome, Italy.
E-mail: a.strumia@unicampus.it

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