

Fascial Plane block and ERAS: it's time to drug sparing

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Fascial plane blocks are widely used in clinical practice in almost all surgical disciplines having demonstrated analgesic efficacy and an opioid sparing effect. Recent studies are showing that this block, when used for anesthetic purposes, could result in a myoresolutive effect, making it very useful in laparoscopic and robotic surgeries as well.

ESP block is a locoregional anesthesia technique that results in blockade of the dorsal and ventral branches of spinal nerves probably by diffusion of the local anesthetic into the paravertebral space. It can be used for anesthetic purposes for thoracic and abdominal surgeries and for antalgic purposes for the treatment of acute and chronic painful conditions. ESP blockade can be performed at all levels of the thoracolumbar spine, and to ensure sufficient cranio-caudal spread of the anesthetic, it is considered essential to inject at least 20 ml of solution. To prolong analgesia, a catheter can be placed [1, 2].

The case of G.T., 67, who underwent laparoscopic hysterectomy surgery, is described. Her medical history includes hypertension, insulin-dependent diabetes mellitus type II, moderate aortic steno insufficiency, uterine K, class II obesity, previous Sars-CoV2 infection. It is decided to perform a bilateral ESP block at T7. After sterile field packing, the high-frequency convex probe is placed longitudinally about 3 cm from the interspinous line. A 22G 100 mm needle is inserted in plane and caudo-cranial direction. This is done until contact is made with the transverse process of T7 and then saline is injected to determine the deep fascia of the erector spinae muscle is raised. At this point 20 ml of Levobupivacaine 0.375% + dexmedetomidine 20 mcg are injected on each side. The opening of the fascial plane is favored by the advancement of the needle within this compartment. After injection, diffusion of the mixture in the fascial plane is confirmed ultrasound.

General anesthesia is then induced: 200 mg of Propofol, 25 mcg of Fentanyl, and 30 mg of Rocuronium (approximately 4 mg/kg) are administered and IOT with 7.5 tube is performed. During the procedure, which started after about 15 minutes, monitoring of vital parameters with ECG, SpO₂, IBP by right radial artery cannulation and TOF is performed. Maintained general anesthesia with Sevoflurane 2%, MAC 1. No hemodynamic changes after incision, pneumoperitoneum and during surgery that lasted about 1h 30 min and no need to use vasoactive drugs. TOF between 20% and 80% during the procedure but excellent my resolution at the operative site so no further boluses of Rocuronium. At the end of the procedure alert and cooperative patient, NRS 3. Peralfgan 1 gr ev is administered. After about 20 min in PACU the patient is taken to the ward in excellent general condition and NRS 1 [3, 4].

As shown by the works of C. Stecco et al and P. Fusco et al local anesthetic deposited in the fascia acts not only on nerve branches contained within it but could involve the free nerve endings, and secondly, with the reduction of fascial densification and stimulation of fascia-related muscle's trigger point could result in my resolving effect. Therefore, the fasciae are no longer to be considered as containers of local anesthetic but as actual targets of anesthesia.

The use of this blockade for anesthetic purposes is still under research, but the resulting my resolution and analgesia could be comparable to those induced by general anesthesia. This allows to decreasing pneumoperitoneum pressures, reduced use of curare [and in some cases curare free], vasoactive drugs and opioids, a reduction in hemodynamic alterations and consequently in length of stay, ICU admissions and costs and could lead not only to "opioid sparing" but also to "drugs sparing". This new concept of fascial blocks could lead to an ERASanesthesia [5].

Conflicts of interest

The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

All authors contributed equally to the manuscript and read and approved the final version of the manuscript.

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