

Other POCUS applications, easy to learn and of increased anesthesiological interest are: the evaluation of proximal lower extremity venous system for deep vein thrombosis diagnosis, the facilitation of placement of orogastric tubes, the evaluation of a patients with low urine output and the estimation of intracranial pressure.

In conclusion, POCUS is progressively becoming more readily available and indications are continuously increasing. It is the day to consider its addition to the anesthesiologist's toolbox as POCUS is rewriting medical history.

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REGIONAL ANESTHESIA CHALLENGES IN THE OBESE PATIENTS

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Obesity is a global epidemic according to the World Health Organization, extremely underestimated, as proved by its continuously increasing numbers. This means that most probably, we will increasingly have to deal with obesity and morbid obesity in our daily practice, as well as with all the comorbidities and challenges these patients usually present. It would be expected that the literature would be full of studies dealing with the challenging subject of regional anesthesia administration in the obese. But this is not the case. Textbooks and most reviews are based on already outdated studies and most commonly, the patients with increased body mass index are excluded from studies. Regional anesthesia in the obese may be advantageous because it helps avoid difficult airway manipulations, gastric content regurgitation and is associated with earlier mobilization and shortening of hospital length of stay. On the other hand, studies mainly coming from obstetrics for the obese parturients, suggest difficulties in central nerve blockade, like difficult patient positioning, difficult landmark identification and catheter dislocation. Prescanning with ultrasound could help with landmark identification. Larger needles may be required, dose adjustment is under investigation and senior anesthesiologists should be available for many of these cases. Peripheral nerve blocks in the obese may pose as well challenges, like difficulties in proper patient positioning and landmark identification, need for phrenic nerve sparing in above the clavicle techniques, since there may be respiratory comorbidities that demand avoiding diaphragmatic paralysis. Continuous catheter techniques may pose problems due to dislocations and increased incidence of infection.

Ultrasound guidance may help overcome many difficulties in regional techniques. But as expected, targets are more deeply situated in obese patients and the ultrasound beams are attenuated as they travel a greater distance through tissue layers. Additionally, when crossing a tissue boundary, a portion is reflected back to the transducer creating artifacts like speckling and clutter which are particular problems in the obese patient. The resulting image may be granular therefore obscuring the underlying anatomy.

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