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EDITORIAL

Regional Anesthesia and Ultrasound-Guided Peripheral Nerve Blocks in Current Practice

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The present issue of Jurnal Anestesiologi dan Terapi Intensif highlights a timely and meaningful development in contemporary anesthesiology. Across original articles, review articles, and case reports, regional anesthesia appears as a recurring and dominant theme, particularly in relation to peripheral nerve block techniques and ultrasound-guided practice. This concentration is not merely coincidental; rather, it reflects a broader transformation in the field, in which regional anesthesia is increasingly recognized as a strategic component of modern perioperative care.[1,2]

Over the last decade, regional anesthesia has moved well beyond its traditional role as an adjunct to perioperative analgesia. It is now widely regarded as an important approach to improving perioperative outcomes through better pain control, reduced opioid exposure, earlier mobilization, and more individualized anesthetic planning. In this context, peripheral nerve blocks have gained particular prominence because they provide targeted analgesia while limiting the systemic adverse effects commonly associated with general anesthetics and opioids. Their growing use also mirrors larger shifts in perioperative medicine toward precision, safety, enhanced recovery, and patient-centered care.[1,2]

One of the principal drivers of this development has been the widespread adoption of ultrasound guidance. Ultrasound has transformed regional anesthesia from a practice that was once largely dependent on surface landmarks and operator experience into one that is more visual, anatomy-based, and reproducible. By enabling real-time identification of nerves, surrounding structures, needle trajectory, and local anesthetic spread, ultrasound has improved not only procedural confidence but also educational value. For both trainees and experienced practitioners, ultrasound-guided blocks represent more than a technical refinement; they also promote a deeper understanding of sonoanatomy and contribute to safer, more consistent block performance.[2–4]

The concentration of manuscripts on this topic in the current issue may also be interpreted as a reflection of changing priorities in anesthesiology practice. Increasingly, anesthesiologists are expected to contribute not only to intraoperative stability, but also to multimodal analgesia, enhanced recovery pathways, and opioid-sparing perioperative strategies. Regional anesthesia aligns naturally with these expectations. Whether used as the primary anesthetic technique in selected patients or as part of a broader multimodal analgesic plan, peripheral nerve blocks are now closely associated with efforts to improve the quality and value of perioperative care.[1,2]

At the same time, the growing enthusiasm for regional anesthesia should be accompanied by equal attention to standardization, training, and safety. Ultrasound guidance, although highly valuable, does not eliminate the need for strong anatomical knowledge, careful patient selection, appropriate dosing of local anesthetics, and vigilance for potential complications. The expansion of block techniques in routine practice must therefore be matched by structured supervision, competency-based education, and clear reporting standards in the literature.[5,6] Technical innovation should not advance more quickly than the systems required to ensure its safe and consistent application. In this regard, journals play an important role not only in disseminating technical developments, but also in shaping the academic and clinical standards by which those developments are evaluated.[3]

The current issue therefore offers more than a thematic collection of manuscripts. It provides a useful snapshot of an evolving discipline in which regional anesthesia is becoming increasingly central to perioperative decision-making. The prominence of peripheral nerve blocks and ultrasound-guided techniques signals a field that is moving toward greater precision and integration, where procedural expertise must remain aligned with patient-centered outcomes and evidence-based practice. At the same time, this evolution raises important questions regarding equitable access to training, consistency in technique reporting, and the extent to which current expansion is supported by robust outcome-based evidence.[1–5]

As readers engage with the articles in this issue, they may recognize that regional anesthesia is no longer a peripheral interest within anesthesiology. It is becoming one of the defining expressions of contemporary practice. Its growing prominence also suggests that the role of the anesthesiologist is being reshaped—not only as a provider of intraoperative anesthesia, but also as a perioperative physician expected to deliver precise, safe, and recovery-oriented care. The challenge ahead is therefore not simply to expand technical capability, but to ensure that innovation in regional anesthesia remains grounded in education, standardization, safety, and clinical relevance.[1–5] Future progress in this field should be accompanied by stronger training frameworks, more rigorous reporting standards, and continued emphasis on clinically meaningful outcomes.

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