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## Acute pain service: Round the clock vigilance

Perioperative pain is still “a little big issue” during the first 3 days after surgery as the intensity of pain is variable due to its subjective experience. A survey from the United States of America (USA) showed that approximately 86% of patients experienced pain after surgery, 75% had moderate-to extreme pain during the immediate postsurgical period, with 74% continuing to experience these levels of pain after discharge. Despite heightened awareness and clinical advancements in pain management, there has been little improvement in post-surgical analgesia as measured by this survey.<sup>[1]</sup>

Good postoperative analgesia is not only important from a humanitarian point of view but has been hypothesized to be associated with better surgical outcome. Development of minimally invasive surgeries such as laparoscopic and robotic surgery also stems from the same logic to facilitate faster recovery and early discharge. Current evidence shows that unrelieved postoperative pain leads to chronic pain conditions. Although the first acute pain service (APS) started in USA in 1988, the concept of APS received credence after the report of the Royal College of Surgeons of England and the College of Anaesthetists in September 1990. The Report made several important recommendations to improve education in analgesia, systematically record pain regularly after operation, and establish acute pain teams in all major hospitals.<sup>[2]</sup> It is interesting to note that nursing staff was found to be the only major additional staffing requirement to lead the development of the service, besides equipment and pharmacy support depending on the patient workload, case mix, type of hospital, and availability of anaesthesiology residents. Thereafter, a surge of APS emerged in developed countries and presently >95% hospitals have an APS. Anaesthesiologists lead the APS team and decide about the analgesic modality, management of side effects, and patient safety.

However, the job profile of each member of the team still unclear. APS includes patient assessment, modality of analgesic delivery system, documentation of records, patient education, audits, and the predefined performance criteria for its evaluation. A survey was conducted among anaesthesiologists in India in 2015 to determine the current status of APS. Only 68 anaesthesiologists reported an existence of an APS in their hospital. Fifty percent of them did not have any written pain protocols and 60% did not have any regular measurement of pain.<sup>[3]</sup> With the availability of ultrasound guidance for precisely blocking the various nerve plexuses<sup>[4,5]</sup> involving upper and lower limbs and the transversus abdominis plane, erector spinae, rectus sheath blocks, patients are monitored by the concerned anaesthesiologists in the postoperative period. However, the amount of training and education of residents and nurses staff with adherence to available APS guidelines still have a long way to go. At present, the jury is still out on whether the age-old central neuraxial techniques such as thoracic epidural analgesia can be replaced by these other regional analgesic techniques. A good regional anaesthesia service provides the APS with a safe and appropriate application of analgesic techniques, thus improving the postoperative pain satisfaction and the hospital experience as a whole. Even when using regional analgesia techniques, anaesthesiologists should assess the patient and be should be vigilant to the details of patient's organ functions, the relevant technique used and the inherent limitations, as well as complications and their expeditious management. Errors of patient-controlled analgesia (PCA) prescriptions and infusion devices, either disposable or reusable, can be mitigated by continuous monitoring of such patients. They can not be considered as “fix and forget” machines. Infusion pump failure events are rare, but reported, and can

jeopardize the safety of patients. In this issue of the Journal, Ray *et al.*<sup>[6]</sup> have reported a case of overrun of elastomeric pump infusion in a 10-month-old child, fortunately without any harm to the patient. All relevant instructions of elastomeric infusers should be strictly adhered to while using these devices and close monitoring and documentation is advisable. Unfortunately, the standard of regional anaesthesia services is not well defined or structured and their functionality is quite variable. Regional anaesthesia targets the noxious transduction, anti-inflammatory drugs target inflammation, and the spinal neuraxial opioids target central sensitization in addition to endogenous pain modulation. Anticonvulsants as adjuvants mitigate hypersensitivity via diverse mechanisms. In postoperative settings, APS combines several such interventions for “multimodal analgesia.” Although the practice of APS is three decades old, its exact impact on surgical outcome is still debated. However, constant vigilance is essential in preventing complications and enhancing patient safety.

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