

Regional Anesthesia: A Vantage Point for Management of Normal Pressure Hydrocephalus

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Abstract : Background: Normal pressure hydrocephalus is a condition caused by abnormal accumulation of cerebrospinal fluid (CSF) within the brain resulting in enlarged cerebral ventricles due to a disruption of CSF formation, absorption, or flow. Over the course of time, ventriculoperitoneal shunt under general anesthesia has become a standard of care. Yet only a finite number of centers have started the inclusion of regional anesthesia techniques for the such patient cohort. Stem Case: We report a case of a 75-year-old male with underlying aortic sclerosis and cardiomyopathy who presented with complaints of confusion, forgetfulness, and difficulty in walking. Neuro-imaging studies revealed disproportionally enlarged subarachnoid space hydrocephalus (DESH). The baseline blood pressure was 116/67 mmHg with a heart rate of 106 beats/min and SpO2 of 96% on room air. The patient underwent smooth induction followed by sonographically guided superficial cervical plexus block and transverse abdominis plane block. Intraoperative pain indices were monitored with Analgesia nociceptive index monitor (ANI, M-doloris™) and surgical plethysmographic index (SPI, GE Healthcare, Helsinki, Finland™). These remained stable during the application of the block and the entire surgical duration. No significant hemodynamic response was observed during the tunneling of the skin by the surgeon. The patient underwent a smooth recovery and emergence. Conclusion: Our decision to incorporate peripheral nerve blockade in conjunction with general anesthesia resulted in opioid-sparing anesthesia and decreased post-operative analgesic requirement by the patient. This blockade was successful in suppressing intraoperative stress responses. Our patient recovered adequately and underwent an uncomplicated post-operative stay.

Keywords : desh, NPH, VP shunt, cervical plexus block, transversus abdominis plane block

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