**Poster Nº 09   Can spinal anesthesia be a regular procedure for endoscopic lumbar spine surgery in the future?**

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**Introduction**: In recent years, spinal anesthesia (SA) has gained popularity in spinal surgery, due to its favorable recovery profile, reduced psychological burden on the patient and avoidance of the adverse effects of general anesthesia (GA). Despite its potential for improving outcomes, awake spine surgery is yet to be widely adopted as a reliable alternative to GA.

**Methods**: An observational retrospective study was conducted from March 2021 to September 2022 to compare the effects of SA with GA, in patients undergoing endoscopic spinal surgery (ESS), in terms of perioperative outcomes and cost effectiveness. Demographic data, anesthetic procedure, length of surgery, anesthesia and stay in the post-anesthesia care unit (PACU), nausea and vomiting (PONV) and analgesic requirements in the intra and post-operative periods were recorded.

**Results**: A total of 66 patients were enrolled: 49 (74.2%) assigned to GA and 17 (25.8%) to SA. Mean age was 47 years and 54.5% of patients were female. Regarding physical status, 58 (87.9%) patients were scored ASA II and 8 (12.1%) patients ASA III. Concerning the surgical procedure, 53 patients underwent one unilateral level decompression (24.5% under SA) and 4 patients two bilateral levels (2 of them under SA). There were no significant differences in demographic characteristics between the two groups. There was, however, a significant association between ASA score and anesthetic technique (P=0.01). Duration of surgery was significantly shorter in the SA group (85.7±35.5min vs 109.3±42.7min, P=0.045) but anesthetic time (127.1±38.9min - SA vs 149.1±47.1min - GA, P=0.091) was similar in both groups. Intraoperative analgesia was significantly higher in the GA group compared with SA group (P=0.014). Duration of stay in the PACU (50.8±23.1min - SA vs 55.6±26.8min - GA, P=0.512) and length of hospital (0.41±0.51days - SA vs 0.55±0.54days - GA, P=0.358) did not differ significantly between the two groups. 21 patients in the GA group requested analgesic medication postoperatively, versus 2 in the SA group (P=0.036). The percentage of patients with PONV was similar in both groups (5.9% of the SA vs 10% of the GA, P=1.0). SA was performed with bupivacaine 0.5% or levobupivacaine 0.5% ± sufentanyl in doses ranging from 6.25 to 15mg according to patient characteristics. In all cases, a dense block of the lower thoracic and entire lumbar region was achieved. Overall, both the patients of the SA patient group and the surgeon expressed satisfaction with awake spine surgery.

**Conclusion**: The presented data shows that SA was associated with lower incidence of analgesic requirements. In contrast to the literature, duration of anesthesia was not significantly shorter in the SA group. However, the SA approach enables more effective use of the operating room due to it requires less positioning time and checking the patient responsiveness and airway control. Additionally, SA has a lower cost of equipment and drugs, making it more cost-effective. In our study, SA was as effective as GA in patients undergoing ESS, making it a reliable alternative to consider in the future.