Numb but Not Forgotten: Dermatome Assessment to Reduce Post-Block Falls

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Background

Orthopedic same day surgery patients receiving spinal anesthesia increased falls in the Post-Anesthesia Care Unit (PACU). The PACU has seen an 11% yearly growth of this patient population. Screening, universal and individualized fall interventions were used. Dermatome recovery assessments were inconsistent.

Objective

Falls in same day orthopedic surgery patients receiving spinal anesthesia will decrease after nurses receive education about dermatome assessment.

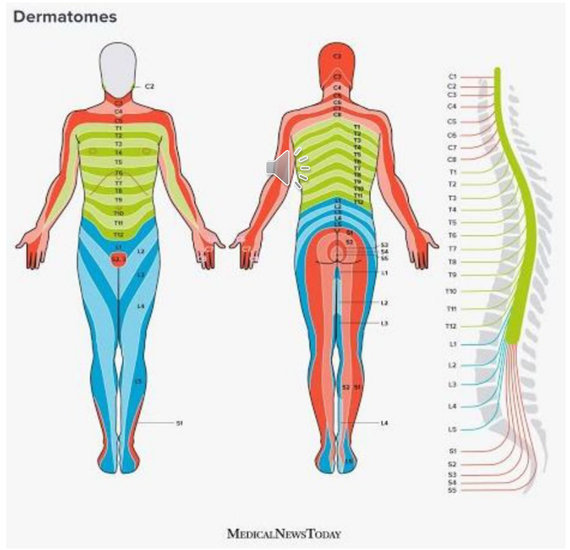
Literature Review

There is a dearth of studies describing prevalence and unique strategies to prevent falls in ambulatory orthopedic patients after spinal anesthesia. Dermatome assessment has been identified as critical in this patient population because post-operative muscle power and sensory recovery is unpredictable.

Methods

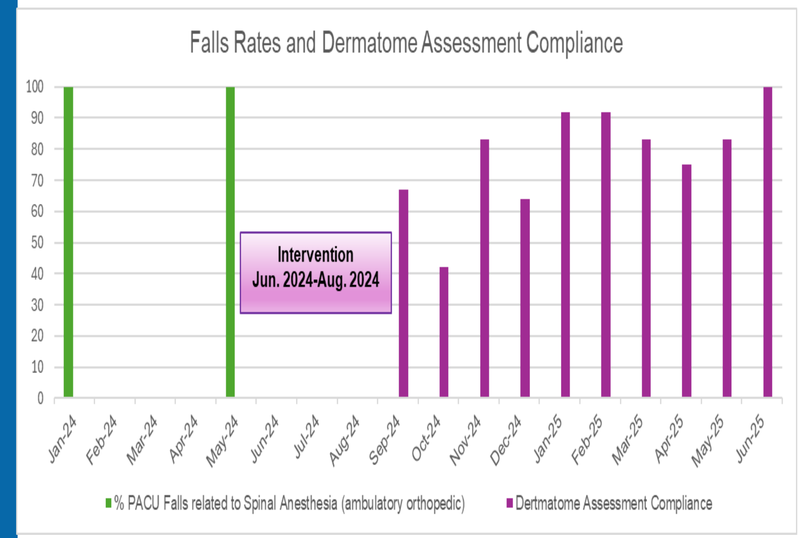
Chart reviews of orthopedic patients who fell in Post-Anesthesia Care Unit (PACU) after spinal anesthesia identified inconsistencies in nurses' evaluation of the return of sensory and motor control. Barriers to dermatome documentation was discussed.

From June to August 2024, the PACU team discussed current and historical findings, lessons learned and ideas to address the practice gap. The education plan developed included: information about the dermatome levels affected by spinal anesthesia, access to dermatome badge backer quick reference tools and customized individual education sessions. Nurses completed three documentation audits weekly after plan was implemented.



Results

In January and May 2024, 100% of PACU falls were attributed to ambulatory orthopedic surgery patients who received spinal anesthesia and lacked dermatome assessment. After the planned intervention was implemented from June-August 2024, there have been no PACU falls attributed to this patient population. Dermatome documentation compliance improved.



Conclusion

Dermatome assessment prior to ambulation decreases patients' risk for falls. Education on dermatomes and process confirmation to reinforce consistent practice of dermatome assessment and documentation, decreased falls in the growing orthopedic patient population who received spinal anesthesia during a 14-month period.

References

Croke, L. (2022). Preventing falls among perioperative patients. AORN Journal, 116(5), P8-P10. https://www-clinicalkey-com.ccmain.ohionet.org/#!/content/playContent/1-s2.0-S1878036922003609?returnurl=null&referrer=null-.

Kester, K., Pena, H., Shuford, C., Hansen, C., Stokes, J., Brooks, K., Bolton, T., Ornell, A., Parker, P., Febre, J., Andrews, K., Flynn, G., Ruiz, RASPAN. (2019). A competency-based orientation program for the registered nurse in the perianesthesia setting (2019 ed.). American Society of PeriAnesthesia Nurses. ISBN 9780017688361; eISBN 9780017688378.

Lam, C. F., Hsieh, S. Y., Wang, J. H., Pan, H. S., Liu, X. Z., Ho, Y. C., & Chen, T. Y. (2016). Incidence and characteristic analysis of in-hospital falls after anesthesia. Perioperative medicine (London, England), 5, 11. https://doi.org/10.1186/s13741-016-0038-z.

Mata, L. R. F. D., Azevedo, C., Policarpo, A. G., & Moraes, J. T. (2017). Factors associated with the risk of fall in adults in the postoperative period: a cross-sectional study. Revista latino-americana de enfermagem, 25, e2904. https://doi.org/10.1590/1518-8345.1775.2904.