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Emergency Department “Bounce Backs” after Posterior Decompression Surgery

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Objectives

Emergency department (ED) crowding has become an epidemic in Canada and the assessment of post-operative “bounce backs” after spinal surgery is a critical aspect of both quality assurance and improvement efforts. Laminectomies and discectomies are among the most common surgical interventions for various spinal pathologies. Our primary objective was to identify “bounce back” patterns and potential areas for improvement in patient education and management, ultimately reducing the likelihood of presentation to the ED.

Method

All provincial ED datasets (EDIS, STAR & Meditech) were queried over 6 fiscal years identifying patients presenting within 90 days of spine surgery. Identification of surgical procedures was completed using the Canadian Classification of Health Interventions codes (1SC80 and 1SE87). A detailed chart review was conducted for each patient who rebounded to any provincial ED within 90 days of a laminectomy/discectomy. The reason for presentation to the ED was categorized as unrelated (medical) or related (surgical) to the procedure.

Results

Between April 1, 2016 – March 31, 2022, a total of 1032 laminectomies and 1133 discectomies were performed on 990 and 1036 patients, respectively. A total of 912 ED visits (n=448 post-laminectomy and n=464 post-discectomy) occurred within 90 days of 2165 surgeries. Reasons for ED visits were categorized as medical (42.6%) or surgical (57.4%). For ED visits related to their surgery, wound care (28.0%), pain management (26.5%) and bladder issues (17.9%) were the most common reasons for presentation. Drainage from the incision (serous or blood) and routine wound checks accounted for 59.1% and surgical site infections account for 27.2% of visits related to the wound. Patients presenting with pain as a primary complaint were discharged home with additional pain medications in 69.1% of cases, whereas 26.0% of patients presented in a pain crisis requiring hospital admission.

Conclusions

A significant number of patients present to the ED following spine surgery. Multiple areas of care improvement have been identified. Immediate initiatives should be focused on post-operative education, pain management and system change to facilitate wound management.