

### **Effect of Acquired Immunodeficiency Syndrome on Postoperative Outcomes of Adult Laminectomy Patients**

**Introduction:** Acquired immunodeficiency syndrome (AIDS) is a severe chronic immune dysfunction caused by the human immunodeficiency virus. The impact of AIDS status on laminectomy outcomes is poorly understood. This study aims to characterize postoperative outcomes of laminectomy in adult patients with and without AIDS.

**Methods:** The National Inpatient Sample was queried to identify adults ( $\geq 18$  years) who underwent laminectomy surgery (ICD-9: 0309, 0302) between 2005 and 2012. Patient demographics and incidence rates (IR) of AIDS diagnosis among laminectomy patients was reported. One to one propensity score matching was performed for age, sex, and obesity. Univariate analysis was used to compare postoperative complications. Multivariate logistic regression controlling for age, sex, race, and obesity was done to determine AIDS status as an independent risk factor for postoperative complications.

**Results:** Two cohorts, one of 183 AIDS patients and one of 183 non-AIDS patients, were identified. Both cohorts had similar distributions of sex (12.6% vs 15.3% female), mean age (49.48 vs 50.67 years), and obesity (1.6% vs 3.3%). The average IR of AIDS diagnosis among all patients undergoing laminectomy was 0.9 (95% CI: 0.7– 1.1) per 1,000,000 person years. The IR increased by 7.86% from 2005 to 2012. The AIDS cohort experienced higher rates of postoperative transfusions, acute renal failure (ARF), sepsis, and in-hospital mortality (all,  $p < 0.05$ ). Moreover, these patients had increased odds of requiring transfusions (OR=3.8), experiencing ARF (OR=13.9), sepsis (OR=15.1), and of in-hospital mortality (OR=9.4).

**Conclusions:** In laminectomy patients, positive AIDS status was associated with patients suffering more transfusions, ARF, sepsis, and in-hospital mortality. These findings may improve risk assessment and providers' approach to patient care prior to laminectomy procedures.