

Session/Poster#

Presenter

C08

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Effect of Having an Atrial Septal Defect on Postoperative Outcomes of Laminectomy in Adult Patients

Introduction: An atrial septal defect (ASD) is a congenital heart defect where there is a pathologic channel that may lead to life-threatening complications. The impact of having ASD on postoperative outcomes of adult patients undergoing laminectomy is poorly understood. The purpose of this study was to compare postoperative outcomes and complications in patients with and without ASD undergoing laminectomy surgery.

Methods: The National Inpatient Sample was queried to identify patients who underwent laminectomy surgery (ICD9: 0309, 0302) from 2005 - 2012. Patient demographics and incidence rates of patients diagnosed with ASD were reported. Univariate analysis was used to compare differences in postoperative complications and in-hospital mortality. Multivariate logistic regression analysis controlling for age, sex, and obesity status was performed to determine laminectomy status as an independent risk factor for postoperative outcomes.

Results: A cohort of 198 ASD patients and 198 non-ASD patients were identified. Both groups had similar sex, age, and obesity distributions. ASD patients who underwent laminectomy procedure experienced higher rates of overall postoperative medical complications (35.4% vs 19.6%, $p < 0.001$), pulmonary complications, acute renal failure, sepsis, deep vein thrombosis, and cerebrovascular events. Analysis revealed that patients with ASD who underwent a laminectomy were at increased risk for overall postoperative acute renal failure (OR=15.1, 95%CI=3.5-65.6, $p < 0.001$), cerebrovascular events (OR=4.8, 95%CI=2.0-12.2, $p = 0.001$), medical complications (OR=4.7, 95%CI=2.8-8.2, $p < 0.001$), and sepsis (OR=3.6, 95%CI=1.5-8.5, $p < 0.001$).

Conclusion: ASD patients who underwent laminectomy experienced higher rates of postoperative medical complications, pulmonary complications, acute renal failure, sepsis, deep vein thrombosis, and cerebrovascular events. Further study is needed to elucidate the effects of ASD on patients receiving laminectomies.