

Is There an Association between Component Separation and Venous Thromboembolism? Analysis of the NSQIP

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Background: Patients undergoing incisional/ventral hernia repair are at risk of developing several postoperative complications particularly venous thromboembolism (VTE), which is a major cause of morbidity and mortality. The aim of this study was to assess 30-day postoperative morbidity and mortality of patients undergoing incisional/ventral hernia repair and to determine the association between component separation and VTE.

Methods: We reviewed the 2005–2011 American College of Surgeons National Surgical Quality Improvement Program databases to identify patients undergoing incisional/ventral hernia repair. Preoperative variables and postoperative outcomes were compared between a component separation group and a non–component separation group. The χ^2 tests and Fisher's exact test were used for categorical variables and *t* tests for continuous variables. Logistic regression analysis was performed to determine preoperative predictors for complications in both groups.

Results: Thirty-four thousand five hundred forty-one patients were included in our study; 501 patients underwent a component separation procedure. A higher rate of wound complications, minor/major morbidity, mortality, and return to the operating room occurred in the component separation group. However, there was no statistically significant difference in deep vein thrombosis/thrombophlebitis and pulmonary embolism rates between the 2 groups ($P = 0.780$ and $P = 0.591$, respectively). Several risk factors were significantly associated with postoperative complications in both groups.

Conclusions: Component separation is used for large and complex incisional/ventral hernia repairs to achieve tension-free midline closure. Although component separation hernia repair is associated with higher incidence of wound complication, morbidity, and mortality, perhaps because of the complexity of the defects, it does not seem to be associated with increased VTE rates. (*Plast Reconstr Surg Glob Open* 2015;3:e429; doi: 10.1097/GOX.000000000000167; Published online 22 June 2015.)

Over 400,000 patients undergo hernia repair in the United States each year.¹ The overall incidence of incisional/ventral hernia following abdominal surgery is reported to be 3–13%.² Patients undergoing ventral hernia procedures tend

to have significant associated comorbidities complicating their repair.^{3,4} Moreover, operative repair of abdominal wall hernias oftentimes imposes significant physiologic alteration for patients and is associated with major postoperative complications.⁵

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