

## **Subxiphoid incisional hernias after median sternotomy.**

**Background:** Subxiphoid hernias are difficult to repair. This study attempts to identify risk factors associated with incisional hernia formation after median sternotomy. STUDY

**Design:** A retrospective review was conducted on patients undergoing subxiphoid incisional hernia repair between 1995 and 2002. The study group was compared with a group undergoing similar cardiothoracic procedures as to body mass index (BMI), comorbidities, complications, tobacco use, length of stay, ICU stay, bypass time, transfusion requirements, and wound infections. Statistical analysis utilized Student's t-test, chi-square, and Kaplan-Meier analysis. **RESULTS:** A total of 117 subxiphoid hernias were repaired; 45 were used for comparison with a matched cohort of 79 patients. Average time between sternotomy and hernia repair was 24.3 months (+/-16.8) with 22 (49%) patients developing hernias within 2 years. Mean followup was 48 months. The study group differed significantly from the nonhernia group in age (56.6 +/- 13.0 versus 62.2 +/- 8.9,  $p = 0.01$ ), mean length of stay (16.3 +/- 22.8 versus 10.2 +/- 6.7,  $p = 0.03$ ), BMI (29.6 +/- 4.5 versus 27.2 +/- 4.5,  $p = 0.01$ ), number of transplantation patients (10 versus 1,  $p = 0.0003$ ), and presence of sternal wound infection (18% versus 3.9%,  $p = 0.02$ ). Multivariate analysis revealed significance in regard to transfusion requirements ( $p = 0.015$ ) and approached statistical significance with BMI ( $p = 0.058$ ). Of the 45 patients undergoing hernia repair, 31(69%) had a mesh repair and 10 (32%) patients recurred. Six (43%) patients without a mesh repair recurred. Seventy-five percent of the patients with sternal wound infections developed recurrent hernias.

**Conclusions:** Transfusion requirements, BMI, and sternal wound infections might be associated with subxiphoid hernias after median sternotomy. Sternal wound infection increases the risk of recurrent incisional hernia.

Mackey R, **Brody FJ**, Berber E, Chand B, Henderson JM. Subxiphoid hernias following Median Sternotomy. *J Am Coll Surg* 201(1): 71-76, 2005.