

Subxiphoid incisional hernias post median sternotomy: a literature review

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Introduction

Subxiphoid incisional hernias (SIH) are one of the complications following a median sternotomy, a surgical procedure to provide access to the mediastinum. Incidence has been reported between 1% and 4%, although the true incidence is not well known due to their asymptomatic nature.

Method

A comprehensive search was performed on multiple sites. Keywords included "incisional hernia OR Subxiphoid hernia" AND "Median sternotomy OR Cardiac Surgery OR Coronary artery bypass graft OR Transplant OR Valve replacement". Articles up to August 1, 2020, were included in this study.

Results

Eight articles were included in the study, with a total number of 132 patients identified. The incidence ranged from 0.81% to 3.44%. There was a mixture of repair methods and follow-up period reported. Recurrence post repair ranged from 10% to 43%.

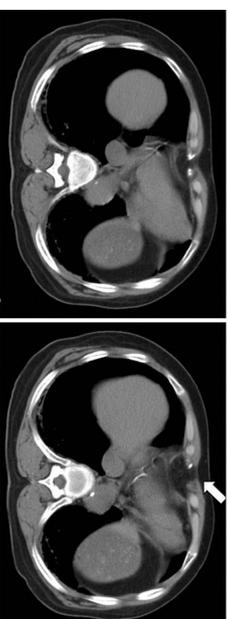


Figure 1: Computed tomography imaging of SIH and a fascial defect (arrow)



Figure 2: Intraoperative photo of SIH

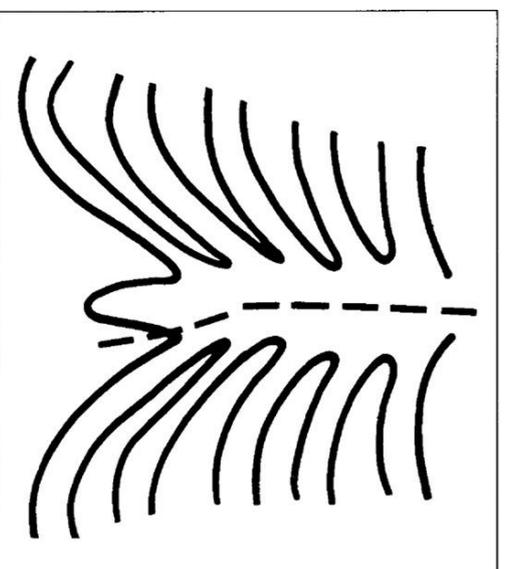


Figure 3: Anterior view of xiphoid process and body of sternum, with a broken line indicating the incision described by Barner

Discussion

Anatomy

SIH generally occur in the midline and are inferior to the tip of the xiphoid (Figures 1 & 2).

Risk factors

The most reported are obesity, wound infection, male sex, left-sided heart failure, long incisions, and repeat operations.

Prevention of SIH

Barner reported a modification of median sternotomy to reduce the incidence of SIH, with a shorter incision and avoiding opening the linea alba (Figure 3).

Management of SIH

Several approaches have been reported, all following basic principles that emphasize tension-free repair and all methods were performed under general anesthetic using appropriate prophylactic antibiotics.

1. Open suture repair with tissue approximation
2. Open repair with mesh
3. Laparoscopic repair

Suture repair carries a higher risk of recurrence when compared to both mesh repair and laparoscopic repair. Laparoscopic repair also has the benefit of a reduced postoperative stay, however the learning curve for the laparoscopic procedure is very steep.

Conclusion

SIH post median sternotomy is rare, however, difficult to repair, and have a high risk of reoccurring. The true incidence remains poorly understood due to their asymptomatic nature. Risk factors, preventions, and several management techniques were discussed above.

← Complete review,
including full reference list

