

CLINICAL PREDICTORS OF THE NEED FOR PERICARDIAL WINDOW FOLLOWING THERAPEUTIC PERICARDIOCENTESIS

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BACKGROUND

Pericardiocentesis with drain placement is often utilized for treatment of pericardial effusion. If significant drainage continues a pericardial window is then traditionally needed. It is unclear which patients will require a pericardial window or repeat pericardiocentesis following treatment with a pericardial drain.

METHODS

We developed a database of patients treated with therapeutic pericardiocentesis in our catheterization lab between 2012 and 2018 and identified 144 unique cases. Iatrogenic pericardial effusions were excluded. Chart review was performed to identify the patient's clinical characteristics. Multivariate analysis was performed to assess for an association between clinical variables and patients requiring subsequent pericardial window or repeat pericardiocentesis versus patients successfully treated with single percutaneous pericardial drainage alone.

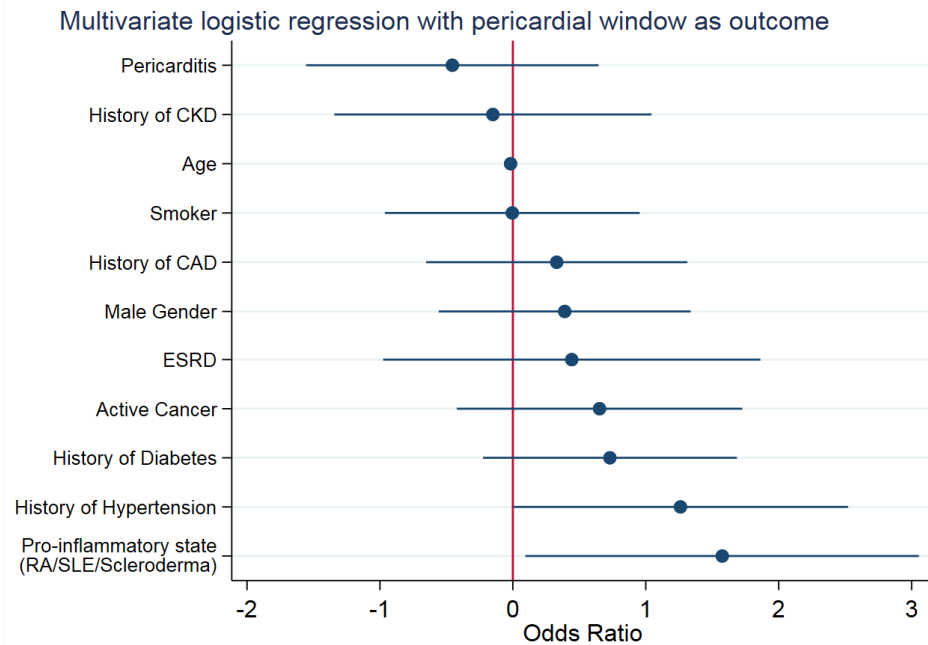


Figure 1: Multivariate logistic regression of clinical factors and the odds ratio of a surgical pericardial window being performed

In patients treated with a therapeutic pericardial drain, those with an inflammatory condition (SLE/RA/Scleroderma) were more likely to require a pericardial window

RESULTS

Baseline characteristics were similar in both groups with the exception more hypertension, systemic lupus erythematosus (SLE), and amount of fluid initially drained in the group that required pericardial window. After multivariate analysis was performed, patients with a concurrent pro-inflammatory state were more likely to require treatment with a pericardial window (OR 4.83, 95% CI 1.10-21.24, $p=0.04$); neither end-stage renal disease nor active malignancy were associated with a greater likelihood of pericardial window placement

CONCLUSIONS

In this retrospective cohort of patients who underwent therapeutic pericardiocentesis, for the clinical characteristics assessed, only patients with an inflammatory condition, such as SLE, rheumatoid arthritis or scleroderma were more likely to go on to require a pericardial window secondary to ongoing pericardial drainage.

LIMITATIONS

The retrospective nature and design of this study raises the possibility of unaccounted for biases. While statistically significant, the estimate is imprecise as noted by the wide confidence interval. Inflammatory markers were not available for most of the cohort.