

**Value of posterior pericardiotomy in prevention of
early postoperative atrial fibrillation and pericardial
effusion after open heart surgery.**

Thesis

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Abstract

Objective: POAF (postoperative atrial fibrillation) is a common complication following heart surgery. It is linked to higher morbidity and hospital costs. The study's goal is to see how efficient posterior pericardiotomy is at lowering the incidence of postoperative pericardial effusion and, as a result, atrial fibrillation.

Methods: This randomized study included 100 patients undergoing cardiac surgery in Kasr Al-Ainy Hospital, Cairo University and Fayoum University Hospital, Department of Cardiothoracic Surgery between March 2022 and September 2022. Patients were divided into two groups, each group included 50 patients, the posterior pericardiotomy group (group A) and the control group (group B). Postoperative evaluations were made after 5 and 30 days and included electrocardiographic study, chest x-ray, and echocardiography.

Results: Early pericardial effusion developed in 4 patients (8%) in group A and 19 patients (38%) in group B ($P<0.0001$). No late pericardial effusion in group A compared to nine (18%) cases had late pericardial effusion in group B ($P=0.002$).

Atrial fibrillation developed in 8 patients (16%) in group (A) and in 11 patients (22%) in group B ($P=0.444$).

Conclusion: Posterior pericardiotomy is a safe technique that significantly reduces the incidence of early and late postoperative pericardial effusion and tamponade, but it has no significant effect in reduction of postoperative AF.

Keywords: Atrial fibrillation, Posterior pericardiotomy, Pericardial effusion, Cardiac surgery.