Aug 28, 2024

Pericardial fluid biomarkers as early predictors for postoperative atrial fibrillation - a systematic review protocol

DOI

dx.doi.org/10.17504/protocols.io.x54v92be1l3e/v1

Florin Mitu[1], Cristina Adam[1], Dragos Marcu[1], Alexandru Dan Costache[1], Radu Sebastian Gavril[1], Clementina Cojocaru[1], Andrei Tarus[1], Mihail Enache[1], Carmen Marinela Cumpat[1], Maria Magdalena Leon[1], Grigore Tinica[1]

[1]"Grigore T Popa" University of Medicine and Pharmacy Iasi, Romania

Cristina Adam
Gr. T Popa University Medicine and Pharmacy

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Protocol Citation: Florin Mitu, Cristina Adam, Dragos Marcu, Alexandru Dan Costache, Radu Sebastian Gavril, Clementina Cojocaru, Andrei Tarus, Mihail Enache, Carmen Marinela Cumpat, Maria Magdalena Leon, Grigore Tinica 2024. Pericardial fluid biomarkers as early predictors for postoperative atrial fibrillation - a systematic review protocol. **protocols.io**
https://dx.doi.org/10.17504/protocols.io.x54v92be1l3e/v1

Protocol status: In development
We are still developing and optimizing this protocol

Created: August 28, 2024

Last Modified: August 28, 2024

Protocol Integer ID: 106570

Keywords: cardiac surgery, biomarkers, pericardial fluid, post-operative atrial fibrillation

Abstract

The aim of this research is to evaluate the systematic review (SR) of prospective studies on biological predictors for postoperative atrial fibrillation in the pericardial fluid following cardiac surgery, so as to provide the latest and comprehensive evidence-based proofs for clinical decision-making.

Introduction

1   **Review question / Objective:**
The aim of this research is to evaluate the systematic review (SR) of prospective studies on biological predictors for postoperative atrial fibrillation (POAF) in the pericardial fluid following cardiac surgery, so as to provide the latest and comprehensive evidence-based proofs for clinical decision-making.

2   **Condition being studied:**
Occurrence of post-operative atrial fibrillation (POAF) after cardiac surgery and biological parameters
(biomarkers) with predictive role in the occurrence of atrial fibrillation.

Methods

3   *1. Eligibility criteria:*
Participant of population: Patients (>18 years old) undergoing cardiac surgery (regardless of the pathology for which the surgery is performed), with pericardial fluid who develop post-operative atrial fibrillation.
Intervention: The impact of pericardial fluid following cardiac surgery on the development of post-operative atrial fibrillation.
Comparator: Patients with no pericardial fluid following cardiac surgery.
Study designs to be included: We will include intervention studies: cohort studies, cross-sectional studies and prospective cohort studies.
Main outcome(s): To evaluate the potential role of pericardial biomarkers in the development of post-operative atrial fibrillation
Languages: English
Publication dates: No restrictions
2. Search strategy
This study is a spin-off from a scoping review and the studies will be searched in the following electronic databases: PUBMED, EMBASE.
3. Study records
During the screening, eligibility, and data extraction phases, the studies will be evaluated in duplicate by 2 independent reviewers. After checking the reviewers' responses, the disagreements will be resolved by a third reviewer. These studies will be organized in the Mendeley reference manager (https://www.mendeley.com/) and subsequently registered in a spreadsheet for data extraction and organization.
The data extraction will include: (1) the study design, (2) number of patients, (3) age of patients, (4) type of cardiac surgery performed, (5) outcome – occurrence of post-operative atrial fibrillation, (6) follow-up period, (7) results – biomarker in the pericardial fluid associated with the occurrence of post-operative atrial fibrillation

Quality assessment / Risk of bias analysis

4   Quality evaluation will be operated by R version 4.1.2, using the revised Cochrane risk-of-bias tool for randomized trials (ROB2). One reviewer will evaluate all studies included in seven domains: 1. Bias due to confounding 2. Bias due to selection of participants 3. Bias in classification of interventions 4. Bias due to deviations from intended interventions 5. Bias due to missing data 6. Bias in measurement of outcomes 7.
Bias in selection of the reported result. Risk of each study will be labelled as "Low risk", "Moderate risk", "Serious risk" and "Critical risk".