Increased 1-year mortality among patients discharged following hospitalization for pericarditis - a nationwide cohort study

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Topic(s):
Pericardial Disease – Epidemiology, Prognosis, Outcome

Citation:
Background: Pericarditis accounts for 5% of all chest pain referrals to the emergency department and is generally considered a benign condition. However, recent studies suggested that pericarditis can be an early predictor of malignant disease, but data on mortality and other morbidity after incident pericarditis is lacking.

Purpose: To assess mortality risk and hospitalization patterns in patients with incident pericarditis.

Methods: In nationwide Danish registries we identified patients discharged from hospital with a first-time diagnosis of pericarditis from 1996 to 2016. Patients with prior myocarditis, heart failure, myocardial infarction and recent thoracic surgery were excluded. The patients were risk set matched with 8 controls each from the general population on sex and year of birth. We assessed 1-year mortality risk using Kaplan Meier and logistic regression adjusted for baseline comorbidities; cerebrovascular disease, chronic obstructive lung disease, cardiac dysrhythmias, ischaemic heart disease and malignancy. We identified subsequent hospital admissions due to new onset cardiovascular-, respiratory- or malignant disease. Differences in frequencies between the pericarditis group and controls were calculated with Chi squared test.

Results: We identified 8,077 patients with pericarditis, median age 45 years (IQR: 32-59) and 75.6% were men. The absolute 1-year mortality was 2.9% in patients with pericarditis compared to 0.8% in the control group (p<0.001) (Figure 1). The adjusted odds ratio (OR) of 1-year mortality was 2.79 (95%-CI: 2.14-3.65, p <0.001). Within the first year after incident pericarditis, hospital admission due to recurrent pericarditis was observed in 10.6% of the patients. Further, we observed significantly higher frequencies of other hospital admissions compared to the matched controls; cardiovascular disease: 4.6% vs. 1.2%, p=0.001, respiratory disease: 3.4% vs. 0.7%, p=0.001) and malignant disease: 1.4% vs. 0.5%, p=0.001).

Conclusion: In a nationwide cohort of patients discharged from hospital with incident pericarditis, we observed more than a triple 1-year mortality compared to age- and sex matched controls. Further, we observed a higher frequency of both cardiovascular and non-cardiovascular hospital admissions, highlighting the need for more focus on underlying morbidity in patients presenting with pericarditis.
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