

Title

An analysis of the outcome of patients admitted with biomarker positive chest pain and normal coronary angiogram.

Introduction

The aim of the audit was to analyse the outcome of patients who were admitted to Mater Dei Hospital with positive biomarker chest pain and normal coronary angiogram. Since a cardiac MRI (CMR) has a diagnostic role in these patients, we sought to determine the number of patients that underwent CMR, how it helped establish a final diagnosis and guide change in treatment.

Purpose

The 2020 European Society of Cardiology Society (ESC) guidelines 'The management of acute coronary syndromes in patients presenting without persistent ST-segment elevation' were used as the standard for assessment of this audit. The guidelines recommend CMR as a key diagnostic investigation. The main differential diagnoses are Takotsubo cardiomyopathy, myocarditis or myocardial infarction (MI). CMR can identify the correct aetiology in as many as 87% of patients with this presentation.

Methods

All the patients admitted to Mater Dei Hospital in 2019 with biomarker positive chest pain (troponin T >14ng/L) with unobstructed coronary arteries on coronary angiography (no angiographic stenosis > 50%), were considered in this audit.

Results

96 patients who presented with chest pain fulfilled the inclusion criteria of elevated cardiac markers and unobstructed coronary arteries. On discharge, 66 of these patients (69%)

remained without a specific diagnosis for their chest pain, 14% diagnosed as myocarditis, 10% as MINOCA and 7% as Takotsubo cardiomyopathy. None of the patients whose chest pain remained unspecified underwent CMR as an inpatient. 21 out of the total number of patients (22%) had a CMR (6 as inpatient during the index admission and 15 as outpatient). In 11 out of the 21 patients, CMR changed and/or confirmed the diagnosis and led to a change in treatment.

Conclusion(s)

The 2020 ECS guidelines recommend that a CMR is performed in all MINOCA patients without an obvious underlying cause. Out of the 96 patients, only 22% of them underwent CMR. The fact that CMR, when carried out, changed clinical management or confirmed a diagnosis in 52% of our patients highlights the importance of performing CMR in this diagnostically challenging situation. In summary, CMR should complement the evaluation of patients with cardiac chest pain, raised biomarkers and unobstructed coronary arteries.