

Correlation or Co-incidence: Myopericarditis & Shingles

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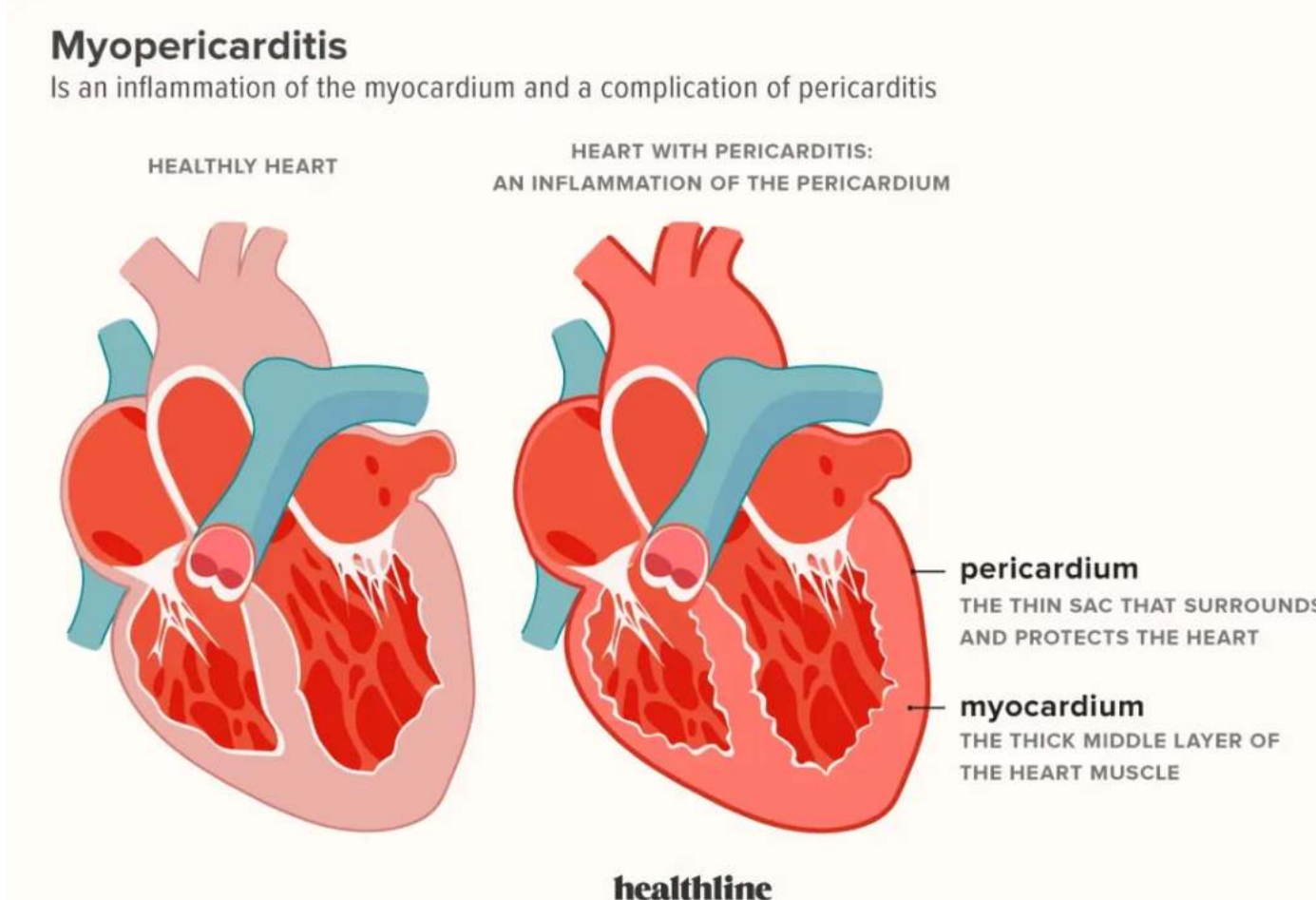
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Introduction

- Myopericarditis (sometimes referred to as perimyocarditis) is a complication of acute pericarditis where the inflammation of the pericardial sac extends into the myocardium (1).
- The clinical presentation is often consistent with pericarditis (pleuritic chest pain, fatigue, and palpitations) with an additional finding of elevated troponins due to the inflamed myocardium.
- In addition to the potential for diffuse ST elevation classically associated with pericarditis, there are a variety of additional EKG findings associated with myopericarditis, including non-specific ST wave changes, PR elevation, PR depression, and QT prolongation (2).
- While some cases of myopericarditis can be attributed to infectious, malignant, or autoimmune etiologies, the majority of cases are idiopathic with no clear origin ever determined (3).
- Diagnosis involves excluding acute coronary syndromes, pulmonary embolism, and other life threatening causes of elevated troponins.
- Cardiac MR can be used to support the diagnosis if available (1). Endomyocardial biopsy is rarely used for severe refractory cases but can provide a definitive diagnosis.
- Treatment is similar to the treatment for pericarditis and includes NSAIDs, colchicine, and exercise restriction (1). For residual symptoms, beta-blockers and glucocorticosteroids can be added.



Case Report

- 53 year old female with a history of hypothyroidism, anxiety and depression, and a recent shingles infection 2 weeks prior who presented to the ED with one day of sudden onset pleuritic reproducible pressure-like chest pain.
- She was found to have elevated troponins, ESR, and CRP in the ED. Chest X ray and CT angiogram were unremarkable with no signs of pulmonary embolism or other acute process. She was admitted to the Family Medicine team for further work up. EKG showed nonspecific diffuse ST changes (day 2).
- On day 3, a cardiac echo was completed showing normal LV and RV systolic function, normal chamber signs, an EF of 58% and no acute pathology. That afternoon, chest pain recurred severely and subsequent troponins were still found to be elevated and higher than original measurement.
- On day 4, cardiac MR was completed and results were consistent with myopericarditis. Cardiology determined she did not require any further work up or intervention. She was discharged with instructions to follow up with cardiology outpatient and anti-inflammatories medication and avoid extraneous exercise for 3 months

References

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3. Manda, Y., Baradhi, K. Myopericarditis. *StatPearls*. 2022.
4. Easton, A., et al. Pericardial effusion and tamponade in the context of herpes zoster: a novel occurrence. *European Heart Journal - Case Reports*. 2022. ytac459

Discussion

- The patient's recent shingles infection is likely to have been the instigating factor for the development of myopericarditis, given no other recent immune-stimulating events, vaccinations, or other likely factors, though causality cannot be established with certainty.
- There are case reports of rare herpes-zoster associated pericarditis and myocarditis, but literature is very limited. One recent review reports only 13 reported cases of varicella-zoster virus associated pericarditis/myopericarditis in adults in published English literature (4).
- Additionally, myopericarditis presenting with chest pain, troponin elevation, and EKG changes and without infectious symptoms is an important diagnosis to be able to establish and differentiate from acute coronary symptoms and other conditions.
- In the future, this patient could hopefully be worked up more quickly with initiation of NSAIDs and colchicine implemented sooner as the team began to suspect myopericarditis.
- This case is an important reminder of the broad differential of acute chest pain and to consider myopericarditis in the event of elevated troponins and EKG changes when acute coronary syndrome is ruled out.

