PERSISTENT PERICARDIAL EFFUSION IN UNCONTROLLED HASHIMOTO'S HYPOTHYROIDISM: A CONSEQUENCE OF MEDICATION NON-COMPLIANCE

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Introduction

Pericardial effusion is a rare but important clue to severe hypothyroidism, typically resolving within months of starting levothyroxine. When effusion persists despite thorough investigation, poor thyroid control and medication nonadherence should be considered.

We present a striking case of chronic pericardial effusion persisting for 6 years due to refractory hypothyroidism from noncompliance, resulting in repeated admissions and excessive radiation exposure

Case Presentation

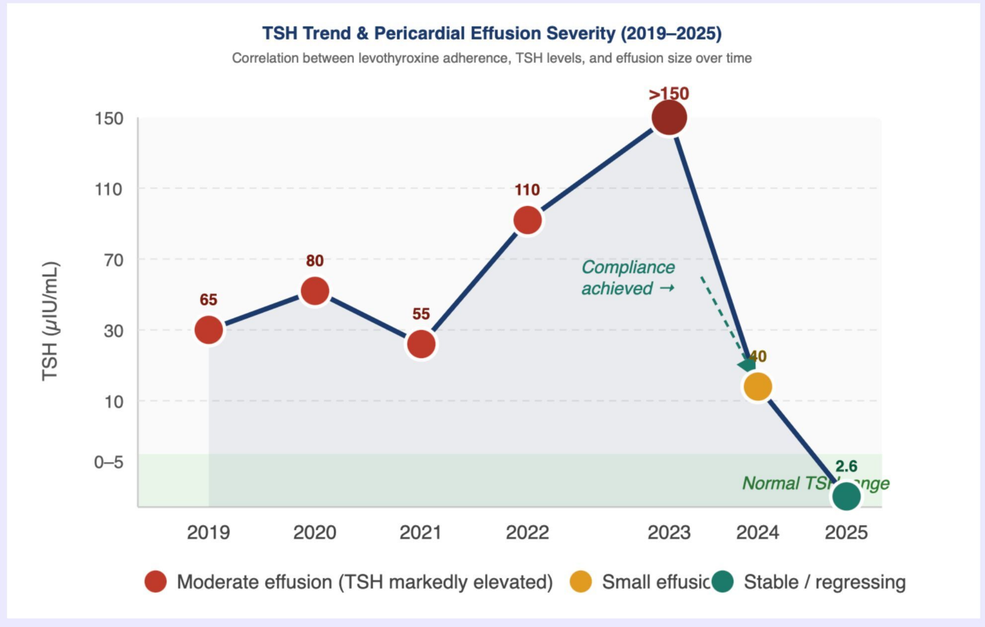
Patient: 50-year-old woman with type 2 DM, Hashimoto's hypothyroidism, non-ischemic cardiomyopathy, CAD, and antiphospholipid antibody syndrome (APLA).

2022–2025: Over 25 visits with recurrent chest pain and dyspnea. Echocardiograms consistently showed moderate pericardial effusions, with pericardiocentesis in 2019 yielding benign fluid analysis.

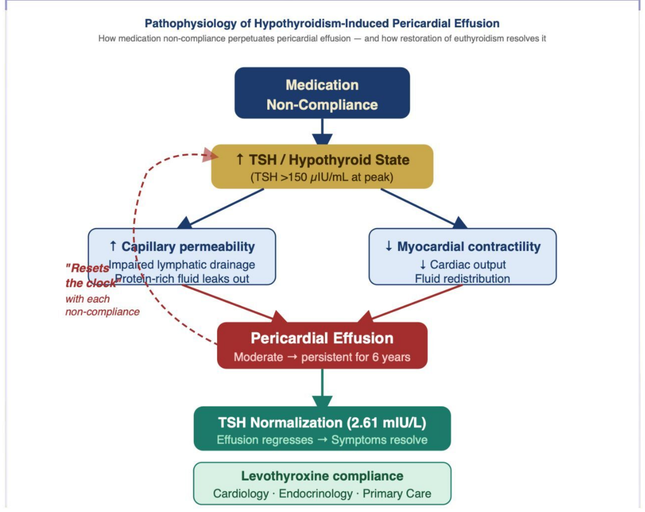
Despite extensive workup — including 56 CT scans, 25 MRIs, multiple cardiac catheterizations (patent coronary stents placed in 2025) — no malignancy, pulmonary embolism, acute coronary syndrome, or active connective tissue disease/lupus was found. Cardiac amyloidosis was also ruled out with a PYP scan in 2023.

Findings

Laboratory review revealed sustained elevations in thyroid-stimulating hormone (TSH), exceeding 150 µIU/mL in 2023, consistent with profound hypothyroidism due to poor levothyroxine adherence. Fluctuations in thyroid function correlated with pericardial effusion size - worsening during uncontrolled hypothyroidism and improving with hormonal correction. Once levothyroxine compliance was achieved and TSH normalized (2.61 mIU/L), effusion size started to regress from moderate to small and became stable eventually. Concurrently, the frequency and severity of chest pain episodes diminished solely with optimized thyroid hormone replacement, eliminating the need for immunosuppressive therapy.



Pathophysiology



Conclusion

Medication nonadherence in Hashimoto's hypothyroidism can sustain pericardial effusion for years, mimicking chronic cardiopulmonary disease and exposing patients to cumulative diagnostic harm.

Achieving and maintaining euthyroidism remains the definitive treatment. This case highlights the importance of adherence counseling and regular thyroid function monitoring in all patients with unexplained or recurrent pericardial effusion. With early identification of the endocrine root cause, patients can avoid years of unnecessary imaging, hospitalizations, and invasive procedures