

Discussion

At presentation, the patient had an abnormal ECG with elevated CK and troponin levels. These abnormalities resolved with thyroxine replacement therapy, and coronary angiography was normal. Hypothyroid cardiomyopathy has been described previously, including ECG changes suggesting ischaemia which have reversed with thyroxine replacement.¹ While this report describes hypothyroid cardiomyopathy secondary to hypopituitarism, it is interesting to note that the presentation was similar.

Serum CK can be elevated in up to 90% of patients with hypothyroidism;² while this is mostly due to the skeletal CK-MM isoenzyme, CK-MB can also be elevated without MI.³ This case shows that Tn-T can be elevated in hypothyroidism, even as part of a hypopituitary picture. A previous laboratory study reported that 65% of patients with hypothyroidism with markedly elevated TSH also had elevated CK, and 13.5% had elevated CK-MB, but Tn-I levels were normal in all samples.⁴ While Tn-I may therefore be regarded as the best humoral marker for myocardial damage in these patients, it is likely that most myocardial enzyme markers are of questionable reliability in hypothyroidism. Furthermore, many hospitals have access to only one troponin assay. Therefore, coronary angiography may need to be considered earlier in these patients.

Conclusion

Physicians will often investigate patients with hypothyroidism for putative acute coronary syndromes, especially as they are at higher risk of coronary atherosclerosis.⁵ In these cases, extreme care is required when interpreting investigations, since many of the ECG and enzyme changes of myocardial ischaemia and/or infarction can be mimicked by hypothyroidism itself, whether it is primary hypothyroidism or, as our case now adds, secondary to pituitary failure.

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Competing interests

No financial or non-financial competing interests.

Authors' contributions

ANS collected the laboratory data, performed the literature review, and wrote the original manuscript. SWD performed the echocardiography and made substantial revisions to the manuscript. DT collected follow-up data on the patient's response to treatment and made significant contributions to the manuscript.

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Erratum

Mir FA, Brown MJ, Appleton DS.
 Lessons in the diagnosis and management of Conn's syndrome.
Clin Med 2007;7:530–2.

Please note that the arrow in Fig 1 on page 530 was covering the 2 cm right-sided adenoma rather than pointing to it. The correct image is reprinted here.

