Lesson of the month 1: Subacute thyroiditis: a rare cause of fever of unknown origin

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FEVER OF UNKNOWN ORIGIN (FUO) IS SOMETIMES A DIAGNOSTIC DILEMMA FOR CLINICIANS. ENDOCRINE CAUSES REPORTED IN THE LITERATURE INCLUDE SUBACUTE THYROIDITIS, THYROTOXICOSIS, ADRENAL INSUFFICIENCY AND PHEOCHROMOCYTOMA. AMONG THESE, SUBACUTE THYROIDITIS IS OFTEN OVERLOOKED AS IT CAN OCCASIONALLY LACK TYPICAL SYMPTOMS. THIS CASE ILLUSTRATES THE FACT THAT SUBACUTE THYROIDITIS SHOULD BE CONSIDERED AS A POSSIBLE CAUSE OF FEVER EVEN IF SIGNS AND SYMPTOMS OF HYPERTHYROIDISM AND THYROID TENDERNESS ARE ABSENT.

KEYWORDS: Fever of unknown origin, FUO, gallium scan, thyroiditis

Case history

A 43-year-old woman presented with a history of high grade fever for 1 month. Her fever was associated with chills and rigors along with mild flu-like symptoms, and was relieved with paracetamol. She had a documented fever almost every day, reaching 39°C. She had no history of weight loss, night sweats, urinary symptoms or recent travel. She had received two courses of antibiotics at her local health centre and private clinic. She was admitted for evaluation of fever of unknown origin (FUO). On admission her temperature was 38.1°C, but during the rest of her hospital stay, she had only a low grade fever.

The patient’s investigations showed a normal full blood count and negative cultures. She had a high erythrocyte sedimentation rate (ESR) of 99 mm/hour. Her infectious diseases work up was negative for hepatitis, Brucella, Q fever and mycoplasma; respiratory viral screen was also negative. The patient was also negative for antinuclear antibody and anti-neutrophil cytoplasmic antibody. There was no evidence of endocarditis on echocardiography. She was prescribed doxycycline to cover atypical organisms but her fever did not improve.

A gallium-67 whole body scintigraphy was done to look for a source of infection; this showed normal physiological radiotracer uptake in the body but, to our surprise, there was an increased radiotracer uptake noted in both lobes of the thyroid gland (Fig 1). This finding was suggestive of an active infective/inflammatory process in the thyroid gland. On further examination of the patient, a small goiter was palpable but was only mildly tender. Her thyroid function showed a free thyroxine level of 23.3 pmol/L (normal range 7.9–14.4) and thyroid stimulating hormone 0.02 mIU/L (normal range 0.34–5.6). A thyroid antibody (anti-thyroid peroxidase) screen was negative. An ultrasound of the thyroid showed that both lobes of the gland, as well as the isthmus, were enlarged with heterogenous texture of the parenchyma of the thyroid gland. There was a nodule measuring approximately 2.63×1.92 cm in the right lobe, and a similar nodule in the left lobe measuring 1.7×0.8 cm. A fine needle aspiration of the larger thyroid nodule showed a colloid nodule.

She was started on ibuprofen three times a day as management of subacute thyroiditis. Following this, her pain and fever subsided (Fig 2).

Discussion

FUO can be described as a temperature higher than 38.3°C on several occasions; a fever lasting more than 3 weeks; and a failure...
Conflict of interest
The authors have no conflicts of interest to declare.

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References

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