PROLOGUE

When presented with a set of symptoms, clinicians are efficient at linking clinical features with specific diseases. However, not infrequently, patients present with multiple pathologies. Therefore when a diagnosis is made, recognising and detecting additional clinical features which might point to additional pathology is important. Furthermore the presence of an additional underlying condition may mask or aggravate the clinical picture. Our case illustrates these observations.

A CASE OF THYROID SARCOIDOSIS

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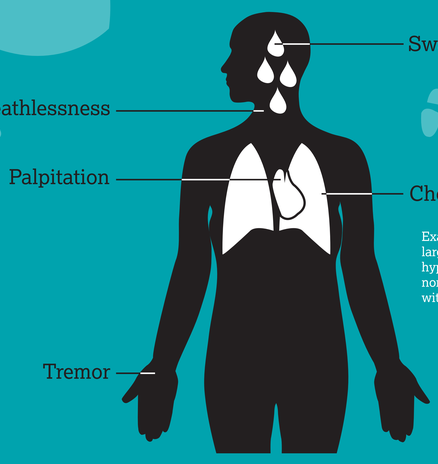
'There is nothing more deceptive than an obvious fact'

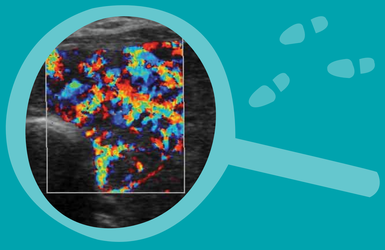
Sherlock Holmes, A Scandal in Bohemia

THE STORY UNFOLDS...

A 53-year-old Caucasian female presented with the following symptoms:



Examination findings revealed a non-tender, large diffuse goitre. Past medical history of hypertention and migraines although a non-smoker. Mother died at the age of 61 with thyroid cancer.



INVESTIGATIONS AND DIAGNOSIS

Results
T4 – 36.7 pmol/L
TSH – undetectable
Thyroid antibodies – 115 IU/ml (NR < 35)
Thyroid ultrasound – Diffuse vascular goitre.

She was diagnosed with thyrotoxicosis with a likely aetiology of Grave's disease.

INITIAL MANAGEMENT

Carbimazole was initially prescribed, 15 mg OD, later increased to 20 mg OD along with metoprolol for her symptoms.

Thyroid function normalised and medication viewed to be successful, until she developed a sore throat...

Patient had developed agranulocytosis and carbimazole was consequentially stopped.

Her neutrophil count recovered, but hyperthyroid symptoms returned. Patient had subsequently developed new symptoms of thyroid eye disease.
T4 – 55 pmol/L
TSH – undetectable

The decision was made for her to undergo a total thyroidectomy.

THE PLOT THICKENS...

Patient was admitted for treatment and given ß blockers and Lugo's iodine prior to surgery. Bloods pre-operatively showed deranged liver function tests.

...This incidental finding culminated in further investigation to uncover another probable contributing aetiology to the original presentation...

Further investigations were performed with results:

- Autoantibody screen, virology, immunoglobulins, ferritin, PT and infection screen: All normal.
- CXR: Bulky hilar, reported not clinically significant.
- Abdominal US: No hepatobiliary tract abnormality, but showed query blilateral pleural effusions and a cystic lesion on either the left kidney or the adrenal gland.
- MR adrenals: No adrenal mass, simple cyst left kidney and query bilateral pleural effusions.
- Echocardiogram: Moderate tricuspid regurgitation, dilated right atrium and elevated pulmonary artery pressure.

Patient underwent uncomplicated total thyoidectomy once thyroid function had normalised.

POST-OPERATIVE – THE CLUES PIECED TOGETHER

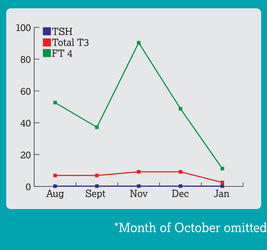
Histology from the surgery showed diffuse hyperplasia, areas of fibrosis and several non-caseating granumolas, adding greater obscurity to the clinical picture.

Post-operatively, the patient's liver function normalised spontaneously and thyroid function returned to normal. Whilst on Thyroxine replacement, however, one symptom from the initial presentation still remained that impacted her daily life: Breathlessness.

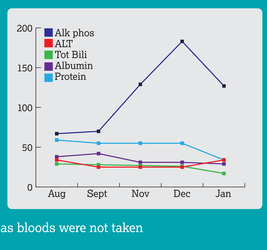
When serum ACE levels showed an elevation at 114 U/L (NR 11-55), the missing puzzle seemed to have been found. The patient was subsequently referred to the respiratory team for investigation and management of pulmonary sarcoidosis.

Elevated ACE levels, breathlessness, non-caseating granulomas, and hilar adenopathy were all clues having presented at different stages during the patient's journey. In the end they were pieced together for the final conclusion of a thyroid gland sarcoidosis diagnosis.

Trend of TFTs throughout patient's journey

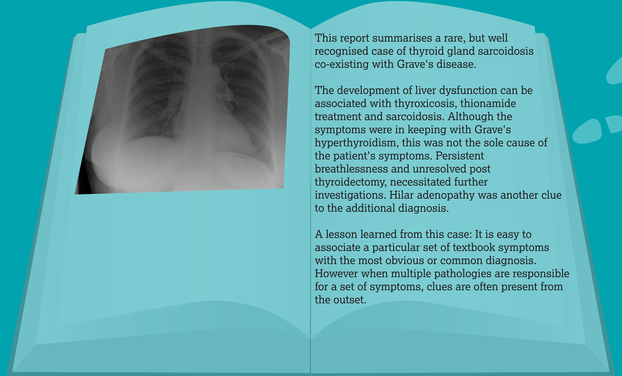


Trend of LFTs throughout patient's journey



*Month of October omitted as bloods were not taken

EPILOGUE



This report summarises a rare, but well recognised case of thyroid gland sarcoidosis co-existing with Grave's disease.

The development of liver dysfunction can be associated with thyroxicosis, thionamide treatment and sarcoidosis. Although the symptoms were in keeping with Grave's hyperthyroidism, this was not the sole cause of the patient's symptoms. Persistent breathlessness and unresolved post thyroidectomy, necessitated further investigations. Hilar adenopathy was another clue to the additional diagnosis.

A lesson learned from this case: It is easy to associate a particular set of textbook symptoms with the most obvious or common diagnosis. However when multiple pathologies are responsible for a set of symptoms, clues are often present from the outset.

In short as our hero more eloquently states:

'Eliminate all other factors, and the one which remains must be the truth'

A Conan Doyle