

# Severe Myxoedema complicated by peri-orbital oedema, gum oedema, SIADH and ECG changes

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## Case

A 71 year old lady presented to MAU with a recent onset of generalised weakness and a history of facial and periorbital swelling developing over seven years. She had also noticed hoarsening of her voice, cold intolerance, weight gain, constipation and reduced appetite.

## Initial Investigations

Marked hyponatremia of 113 mmol/L with severe hypothyroidism (TSH 45.24 mIU/L, fT4 1.1pmol/L and TPO antibody 358 IU/ml). Subsequent tests confirmed SIADH (serum osmolality of 236 mOsmol/kg, urinary osmolality of 604 mOsmol/kg and urinary sodium 48 mmol/L). Other pituitary hormones were unremarkable (post-menopausal range of FSH and LH, random cortisol of 706 nmol/L and prolactin 159 mIU/L). Initial ECG showed sinus rhythm, rate 56 bpm with biphasic T wave in V2 - 5. CXR did not reveal any abnormality.

## Treatment

She was started on oral Levothyroxine 50 mcg OD, which was increased to 100 mcg OD after 4 days. She did not require liothyronine as she responded clinically well with levothyroxine and given her abnormal ECG there were concerns about potentially provoking a cardiac event. Hydrocortisone was not given as she did not meet the clinical criteria for myxoedema coma.

## Subsequent Outcomes after treatment

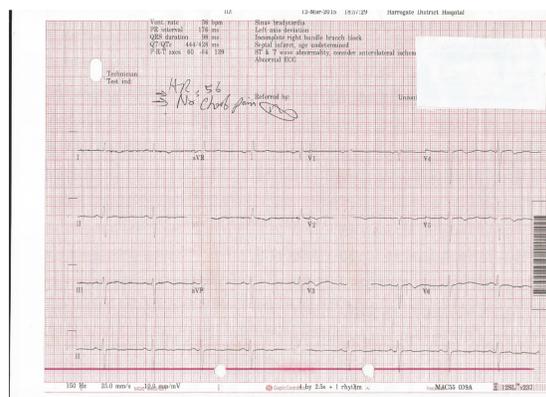
Hyponatremia slowly responded to fluid restriction and resolved completely a month after starting Levothyroxine. Her TSH improved to 12.4 mIU/L after 4 weeks and normalised within 7 weeks of treatment. On review two months later, her periorbital oedema is much improved, her voice is less hoarse and her gums have shrunk so much that she has had to get a new denture. T wave changes on ECG have resolved. Echocardiogram showed normal ventricular function.



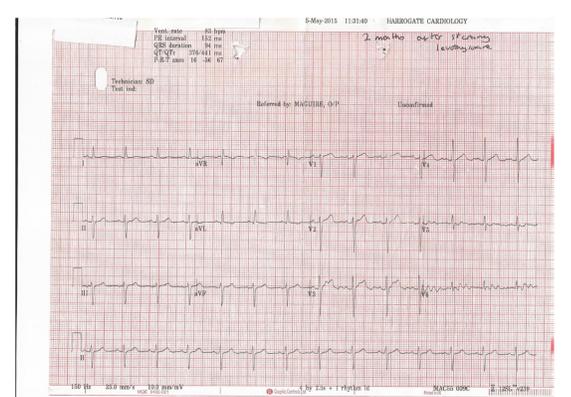
Pre-treatment



Post-treatment



Pre-treatment ECG



Post-treatment ECG

## Discussion

- Myxoedema can present with severe SIADH.
- Treatment may require fluid restriction as well as hormone replacement.
- It can take sometime for the hyponatraemia to resolve.
- Gum oedema is a documented feature of hypothyroidism.
- Widespread T wave inversions on ECG can be seen in untreated myxoedema.