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Case Report

Hypoparathyroidism – Presenting 40 years after thyroid surgery

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Hypoparathyroidism after thyroidectomy is a well recognised post-operative complication. Usually however it occurs in the immediate post-operative period. We report here a patient in whom the diagnosis of hypoparathyroidism was made 40 years after thyroid surgery.

CASE REPORT

An 81-year-old woman was referred by her general practitioner with a three-month history of fatigue, generalised muscle weakness, anorexia, insomnia and depression. She also complained of an unpleasant metallic taste in her mouth occurring over the same length of time. Her symptoms were severe enough to give the patient concern as to whether she could maintain her independent lifestyle.

Apart from a thyroidectomy carried out in 1957, and bilateral cataract extractions in 1988 and 1990, she had had no other illnesses. She was not receiving any drugs.

On examination a thyroidectomy scar was evident. She had a mild proximal muscle weakness, a positive Trousseau's sign and a positive Chvostek's sign.

Serum calcium was 1.25 mmol/L (normal range 2.10-2.60 mmol/L); phosphate 1.97 mmol/L (normal range 0.8-1.55 mmol/L); alkaline phosphatase 134u/L (35-120 u/L); magnesium 0.61 mmol/L (0.70-1.03 mmol/L); T4 27.9 pmol/L (7.6-19.7 pmol/L); T3 1.9 pmol/L (1.5-3.0 pmol/L); TSH 0.02 mU/L (0.4-4.5 MU/L); parathyroid hormone <10 ng/L (10-50 ng/L). Full blood count, renal function and autoantibody screen were normal. An electrocardiogram showed a prolonged QT interval of 568 msecs.

The patient was treated with intravenous calcium (75 mmols over five days) and intravenous magnesium (5 grammes over 24 hours). She was stabilised on 1 gram of calcium daily, calcitriol 250 mgs twice a day, and bendrofluazide 5 mgs daily.

Her symptoms resolved as her calcium level improved and she regained her independence. At the time of discharge 10 days later, her calcium level was 1.9 mmol/L and TSH was 0.01 mU/L (0.4-4.5 mU/L). This persistent thyroid abnormality has continued throughout the follow-up period. 16 weeks later T4 was 15.1 pmol/L and TSH 0.02 mU/L, and 20 weeks later T4 was 16.2 pmol/L and TSH 0.01 mU/L. A TRH stimulation test gave a TSH of 0.02 mU/L; 0.05 mU/L, and 0.04 mU/L at 0.20 and 60 minutes respectively. The serum calcium remains within the normal range (2.58 mmol/L) on replacement therapy. In more recent weeks the patient has experienced new clinical symptoms, in particular episodes of sweating. Treatment with carbimazole has been introduced.

DISCUSSION

Hypoparathyroidism after thyroid surgery usually occurs within days. There are only a few case reports in the literature of a long latent period before presentation.

Lehmann and Leidy[1] reported the case of a 59 year old woman admitted to hospital with a tonic-clonic seizure, due to hypocalcaemia secondary to hypoparathyroidism occurring 38 years after thyroidectomy. In 1995 Bellamy and Taylor[2] reported a case of a 47 year old woman presenting

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with seizures as a result of hypoparathyroidism due to thyroid surgery 36 years earlier.

Billis, Montgomery and Clarke[3] published a paper on partial hypoparathyroidism following thyroid surgery and commented there was no direct relationship between symptoms experienced by patients and calcium deficiency. The reported symptoms are similar to those in our patient. However, our patient was hypocalcaemic on admission and responded to calcium replacement therapy, suggesting that her symptoms were related only to her recent calcium level. She had no previously-documented serum calcium measurement. Thus we are unable to say when in the post-operative period she became hypocalcaemic. Her response to calcium therapy would also make thyrotoxicosis an unlikely cause of her presenting symptoms. These resolved while her thyroid function test abnormalities persisted.

Our patient's latency period of 40 years is the longest between thyroid surgery and the presentation of hypoparathyroidism of which we are aware. Also she presented with vague symptoms related to hypocalcaemia rather than the florid symptoms present in the reported cases. It highlights the value of a serum calcium measurement in elderly patients presenting with vague symptoms.

REFERENCES

1. Lehmann J B, Leidy J W. A post-thyroidectomy convulsion: an unusual presentation of chronic hypoparathyroidism. *W V Med J* 1994; **90**: 420-1.
2. Bellamy R J, Kendall-Taylor P. Unrecognised hypocalcaemia diagnosed 36 years after thyroidectomy. *J Roy Soc Med* 1995; **88**: 690-1.
3. Billis A, Montgomery D A D, Clarke G E. An investigation into the prevalence of symptoms of 'partial' hypoparathyroidism following thyroidectomy. *Irish J Med Sci* 1967; (6th Series): 105-16.