Enigmas & Hypotheses

The editorial team are pleased that the request for submission of novel hypotheses generated by interesting clinical observations has produced such a positive response. As mentioned in a previous editorial the reports should be short, with a defined hypothesis and will be subject to peer review. The following are the first in the series and are good illustrations of what is envisaged.

Perhaps these and subsequent observations might stimulate important and interesting prospective research protocols.

Chronic renal failure: another complication of this interminable condition?

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Two patients on dialysis for chronic renal failure and hyperparathyroidism were referred for total parathyroidectomy. The first was a 32-year-old man, who had pre-operative methylene blue infusion. Four coloured parathyroid glands were readily identified and excised. Histology confirmed three hyperplastic parathyroids and a thyroid nodule containing a 12-mm diameter incompletely excised papillary carcinoma. This had clearly taken up the methylene blue and masqueraded as a hyperplastic parathyroid.

A 20-year-old man with similar renal and endocrine pathophysiology underwent a total parathyroidectomy. Three definite hyperplastic parathyroid glands were encountered and excised and, in lieu of a definite fourth, various small nodules were excised from the environs of his very nodular thyroid. Histology confirmed three parathyroids, reporting all the nodules as thyroid tissue except one, which was a lymph node replaced by papillary thyroid carcinoma.

Both patients subsequently had a total thyroidectomy (and completion parathyroidectomy), radio-iodine, and thyroxine replacement/suppression. Both specimens showed multiple foci of papillary thyroid carcinoma. The first patient remains well and cancer-free after 8 years, and the second is well after 4 months.

My interest changed from identifying methylene blue as a potential cause of 'false-positive' parathyroid localisation, to associating dialysis-dependent chronic renal failure with multifocal thyroid papillary carcinoma. This is difficult to rationalise, as neither of the patients had been transplanted or immunosuppressed. My yearly average return of approximately 50 operative thyroid specimens has yet to comprise any other with occult multifocal papillary carcinoma. However, my interest is piqued: I wonder what the proportion would be in the thyroids of patients with dialysis-dependent chronic renal failure?

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EDITORIAL COMMENT

The hypothesis proposed by these two cases is that patients with chronic renal failure on dialysis have an increased likelihood of developing multifocal papillary carcinoma of the thyroid. Two rare conditions can occur synchronously but is there a true association? Have any of our readers observed a similar relationship?