The black thyroid: an unusual finding during neck exploration

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Summary: Black thyroid discolouration has been reported in post-mortem examinations on patients who have previously taken minocycline. The discovery of this phenomenon during neck exploration and a review of the possible mechanism of black thyroid discolouration are discussed in this paper.

Introduction

The chance finding of coal-black thyroid discolouration during neck exploration is an unusual and bewildering event for the surgeon. A review of the world literature reveals that black pigmentation of the thyroid gland is rare, poorly recognized and is usually associated with chronic minocycline therapy. We report finding a case of a black thyroid diagnosed peroperatively and review the possible pathogenic mechanism of this disorder.

Case report

A 21 year old man presented with a history of frank haematuria and was found to have renal calculi. A metabolic screen revealed an elevated serum calcium level (2.95 mmol/l) and parathyroid hormone level (0.45 ng/l). His thyroid function tests were within normal limits. A diagnosis of primary hyperparathyroidism was made and he underwent neck exploration.

At operation the thyroid gland was found to be uniformly coal-black in colour but was otherwise macroscopically normal. A section of thyroid gland was excised because of its grossly abnormal appearance (Figure 1). A parathyroid adenoma, which was not made any easier to identify by the thyroid pigmentation, was excised.

Post-operatively, questioning revealed that the patient had received a course of minocycline 100 mg..............

Figure 1 Cut surface of thyroid gland showing uniform black discolouration.

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twice daily over a period of 3 months for the treatment of acne. Histological examination of the excised thyroid tissue demonstrated normal follicular pattern with multiple fine dark brown granules within the cells lining follicles (Figure 2).

References