

Primary Hyperparathyroidism with Carcinoma of the Right Breast – A Case Report

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Summary

A patient with carcinoma of the right breast and coincidental primary hyperparathyroidism is presented. The distinction between hypercalcemia of malignant and hyperparathyroid origins is based on biochemical analysis and localisation of parathyroid adenoma on a computer tomogram of the neck.

Key Words: Primary hyperparathyroidism, Breast carcinoma

Introduction

Hypercalcemia is commonly attributed to malignant metastases or primary hyperparathyroidism. Hypercalcemia due to primary hyperparathyroidism and hypercalcemia due to skeletal metastases from a malignant disease are distinguishable by biochemical analysis. We present here a case of infiltrating ductal carcinoma of the right breast with a coincidental primary hyperparathyroidism.

Case Report

A 54-year-old Chinese lady was admitted for elective mastectomy for carcinoma of the right breast. Her pre-operative biochemical investigations revealed persistent elevation of serum calcium (3.3 to 3.9 mmol/L) and serum parathyroid hormone (more than 872 pmol/L). Serum phosphorous was low (0.72 mmol/L).

Ultrasound examination of the hepatobiliary system and kidneys revealed multiple gallstones and a right renal calculi. Computed tomogram of the neck

revealed a 3.5 x 2.0 cm hypodense mass in the postero-medial aspect of the left thyroid lobe.

Right simple mastectomy with axillary clearance was done. Histopathological examination of the breast specimen reported an infiltrating ductal carcinoma. Exploration of the parathyroid was done three weeks later. At operation, a well encapsulated left superior parathyroid adenoma was found. The adenoma was removed.

She developed transient hypocalcemia (serum calcium 1.9 mmol/L) on the second post-operative day. Her remaining post operative stay was uneventful. Repeat serum calcium at three and six months after surgery was normal.

Discussion

Primary hyperparathyroidism in patients with breast cancer is rare but has been reported¹. The coexistence of the disease is likely to be coincidental as there is no satisfactory explanation as to why patients with

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breast cancer should develop primary hyperparathyroidism.

Evidence of primary hyperparathyroidism in this patient was based on persistent elevation of serum calcium, low serum phosphorus and a marked elevation of serum parathyroid hormone.

Hypercalcemia in this patient was initially thought to be due to bone metastases from carcinoma of the breast. However, marked elevation of serum parathyroid hormone and the presence of enlarged parathyroid adenoma on a computed tomogram of the neck suggested that hypercalcemia was secondary to

the adenoma. The presence of gallstones and renal calculi are also common findings in patients with hypercalcemia of parathyroid origin. Furthermore, biochemical evaluation have indicated that bone resorption from metastatic disease was generally not enough to account for hypercalcemia².

Recognition of non malignant cause of hypercalcemia is essential as it offers a different outcome. The prognosis of primary hyperparathyroidism following surgery is good. Rudberg³ reported permanent normocalcemia in 88 per cent of his patients following removal of parathyroid adenoma.

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