

CASE REPORT

PARATHYROID CARCINOMA

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Parathyroid carcinoma is a very rare cause of primary hyperparathyroidism and these tumors are usually hyper-functioning as compared to other malignant endocrine tumors. Surgery is the only effective primary treatment. We report a patient, who presented with pathological fracture of femur, hypercalcemia, bilateral renal stones, markedly raised Parathormone levels and palpable mass in the neck. Parathyroid adenoma was initially diagnosed and localized at left lower gland by Sestamibi scan and ultrasonography. She underwent surgery and enlarged parathyroid gland was removed. Intra operatively there was no evidence of local invasion or lymph nodes involvement but biopsy report suggested malignancy.

Keywords: Parathyroid carcinoma, Adenoma, Primary hyperthyroidism, Sestamibi scan.

INTRODUCTION

Parathyroid carcinoma is a very rare malignancy and the least common among endocrine malignant tumors. Males and females are equally affected and 95% of tumors are functioning.¹ Parathyroid carcinoma is more likely in patients having severe hypercalcemia with lump in the neck. Preoperative differentiation from adenoma is usually very difficult.² Per-operative diagnosis can be aided by the use of frozen section. Being a rare disease, clear consensus is not available regarding the optimal management of patients with this condition. In pre-operatively diagnosed and frozen section proven cases, enblock dissection is recommended and postoperative radiotherapy appears successful for local control. In many studies the 5-year survival is reported as 85%, and the 10-year survival close to 77%.³

CASE REPORT

A 45 year old lady was admitted in surgical 'A' unit of Ayub Teaching hospital with pathological fracture of shaft of left femur. Her serum calcium was 15.3mg/dl (Ref: 9-11mg/dl), alkaline phosphatase 392mg/ dl (ref: 41-133units/L), serum Parathormone 1641pg/ml (Ref:10-69 pg/ml) and serum proteins were within normal range.

Her abdominal ultrasound and X-Rays suggested bilateral small renal calculi. Skeletal Scintigraphy discovered generalized uptake of isotope suggestive of metabolic bone disease. Sestamibi scan with Tc99 for parathyroid was also performed which suggested left lower Parathyroid adenoma. Thyroid ultrasound also supported a 3.5x 2.5 solid nodule at left lower pole of thyroid.

She was operated after preparation and enlarged left lower parathyroid was removed (Fig-1 & 2). It was 3x2.5 cm large and weighed 12 grams

and looked benign. After the operation her serum calcium gradually came down to 8.5 mg/dl.

Fig-1: Enlarged left lower parathyroid seen peroperatively

Fig-2: Actual size and shape of the tumor

Histopathology suggested parathyroid carcinoma due to presence of trabecular arrangement, spindle shaped morphology of tumour cells, presence of mitotic figures, dense fibrous bands and microscopic capsular invasion.

After surgery the patient had an uneventful recovery and is being followed up for serum calcium and parathormone levels. Post operative radiotherapy to the neck is not yet decided.

DISCUSSION

Parathyroid carcinomas constitute only 0.5-1% cases of Primary hyper-parathyroidism. In this case absence of local invasion and distant metastasis,

confused the condition with simple parathyroid adenoma. Similar experience is also reported by Iacobone et al.⁴ High incidence of malignancy is reported in cases having palpable neck mass and severe hypercalcemia,⁵ as was seen in our patient as well. This functioning tumor was accurately localized by Sestamibi scan, however malignant status remained to be diagnosed on histological examination as reported by Busaiday et al as well.⁶

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