EP 331

# THE RARE CAUSE OF PRIMARY HYPERPARATHYROIDISM: PARATHYROID CARCINOMA

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## Introduction :

➢ Parathyroid carcinoma (PC) is a rare endocrine malignancy which accounts for 0.005% of all cancers and less than 1% of primary hyperparathyroidism cases. This uncommon tumor usually occurs during the fifth decade of life, with equal frequency in both sexes, and has an indolent but progressive course. It's frequently symptomatic and patients may have high values of serum calcium and parathyroid hormone (PTH) with a palpable cervical mass. PC generally occurs as a sporadic disease, and less frequently in the setting of genetic syndromes such as hyperparathyroidism-jaw tumor syndrome and multiple endocrine neoplasia. In this study we present five different PC cases followed in our clinic.

## Cases:

➢ There were 2 female and 3 male patients with PC. The mean age of the patients was 50.4±13.7(38-65). They had presented with weakness, headache, nausea and vomiting, and widespread bone pain. One of the patients had bone fracture and one other patient had nephrocalcinosis. The mean serum calcium, phosphorus and PTH levels were 15.3±2.7 mg/dL (ranging between 11.6 and 18.9 mg/dL), 2.4±0.8 mg/dL and 869.4±881.9 pg/mL (ranging between 87pg/mL and 2500pg/mL), respectively. Histopathologically, mean tumor size was 29.2±11.1 (15-44) mm. Plasma calcium, phosphorus and PTH levels were in the normal range and 36 months after surgery in 2 patients. Local recurrence was observed in 2 patients and reoperation was performed. One other patient withlung and bone metastasis had still high serum Ca and PTH levels despite recurrent surgeries for six times.

**Table 1:** Data of patients with Parathyroid Carcinoma

| | Mean | Range |
|---|---|---|
| **Age** | 50.4±13.7 | [38-65] |
| **Plasma calcium (mg/dL)** | 15.3±2.7 | [11.6-18.9 ] |
| **Plasma phosphorus (mg/dL)** | 2.4±0.8 | [2.1- 3.4] |
| **PTH (pg/mL)** | 869.4±881.9 | [87- 2500] |
| **Mean tumor size (mm)** | 29.2±11.1 | [15-44] |

## Conclusion:

➢ PC is usually that of a slowgrowing neoplasm and indicates progressive end-organ damage from disturbed calcium homeostasis. While some patients present with mild increases in serum calcium and PTH levels, some might have very severe hypercalcemia and hyperparathyroidism. Similarly, prognosis varies from cure to life threatening unresectable and metastatic disease depending on the presentation and surgical success.