

## Adult Best Poster Presentation

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#### CASE SERIES OF PARATHYROID CARCINOMA: A SINGLE CENTER EXPERIENCE

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#### INTRODUCTION

Parathyroid carcinoma is a rare but aggressive malignancy of the parathyroid gland, often presenting with severe hyperparathyroidism and associated complications such as hypercalcemia and nephrolithiasis. This study aims to describe the clinical presentation, biochemical profile, imaging findings and treatment modalities and outcomes of patients with parathyroid carcinoma.

#### METHODOLOGY

A retrospective review of patients diagnosed with parathyroid carcinoma (PC) was conducted. Data on demographic characteristics, clinical presentation, biochemical markers, preoperative imaging findings, treatment and postoperative follow-up were collected.

#### RESULT

A total of ten cases were identified, majority were female (70.0%) with a median age of 54 years (range: 45.1-60.9 years). Majority presented with symptomatic hypercalcemia (70.0%). One-third exhibited neck swelling, renal stones, and nephrocalcinosis. Biochemical analysis revealed markedly elevated calcium levels (median: 3.7 mmol/L, range: 3.28-3.78), hypophosphatemia (0.59 mmol/L, range: 0.503-0.698), significantly elevated intact parathyroid hormone (iPTH) levels (median: 257 pmol/L, range: 122.4-366.0) and elevated ALP levels (median: 312 g/L, range: 121.8-754.3). Preoperative imaging included ultrasonography (90.0%), parathyroid scintigraphy (70.0%) and CT neck (60.0%). Of the seven parathyroid scintigraphies performed, two (28.6%) failed to identify a hyperfunctioning parathyroid lesion. The median PC size is 2.9 cm (range: 1.90-3.33 cm). Five patients (50.0%) had metastatic PC involving lymph nodes, lungs and bones. All patients underwent surgical resection, with adjuvant radiotherapy administered in three patients (30.0%). Two patients (20.0%) experienced recurrence, occurring 4 months and 28 months postoperatively.

#### CONCLUSION

Parathyroid carcinoma remains a challenge to diagnose as it closely resembles benign primary hyperparathyroidism. It should be considered in the presence of severe hypercalcemia, significantly elevated iPTH and a large parathyroid lesion. Early identification of PC through biochemical markers and imaging, coupled with surgical management is essential for optimal outcomes. Larger studies are warranted to further elucidate prognostic factors and optimize therapeutic strategies for this rare disease.