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Clinical outcome of patients with parathyroid gland carcinoma -single centre experience

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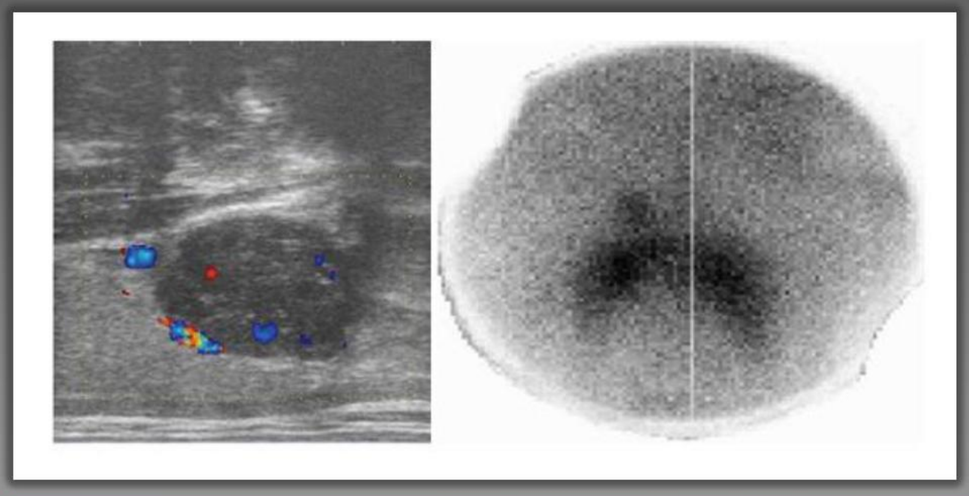
Aim

To determine clinical predictors of parathyroid gland carcinoma recurrence.



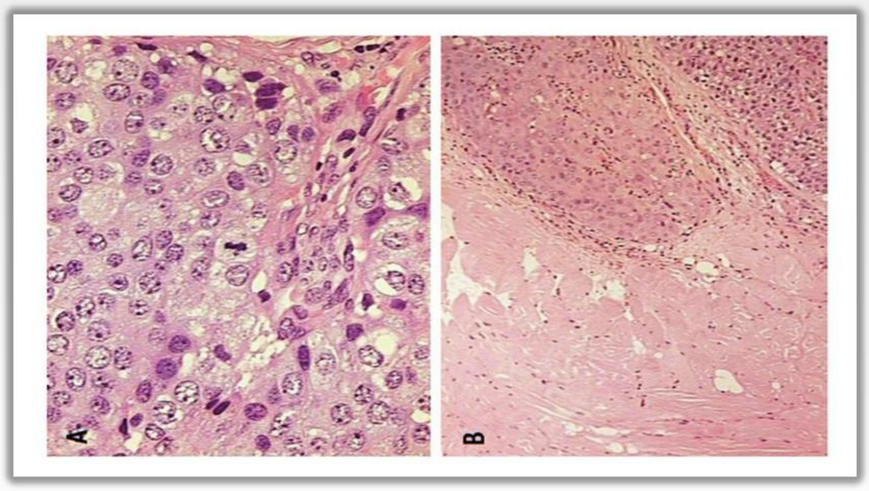
Doppler ultrasound showing well-defined hypoechoic mass with color signals of few surrounding vascular structures and Tc-99m sestamibi planar scan with pinhole collimator, 10 min post injection.

Methods

We evaluated outcome of eight patients with primary hyperparathyroidism due to parathyroid carcinoma who were followed at University Hospital Centre Zagreb, Department of Endocrinology in period from 2004 to 2014. The median follow-up was 6 (2-14.5) years. Six patients (3 male, 3 female), median age 57.5 (42-71) years experienced long-term remission after the surgery whereas two patients had unfavourable course of the disease. In patients with remission hypercalcaemia was known in median for 4 (1-16) years before the surgery. At the time of diagnosis median PTH was 48 (24-147) pmol/L (normal value 0.2-6.7 pmol/L). All of them had renal impairment, hypertension and osteoporosis with two of them previous fractures. Following surgery hypocalcaemia rapidly developed requiring intravenous calcium replacement and prolonged hospital stay. Two female patients (age at diagnosis 31 and 32 years) had poor disease outcome. Their initial diagnosis was established on the basis of acute complication of hypercalcaemia; one of them was pregnant and her new born had severe neonatal hypocalcaemia whereas another patient had episode of acute pancreatitis. Formerly they had no recognized comorbidities related to hypercalcemia with the exception of osteoporosis without fractures. Their PTH values were 72 pmol/L and 36 pmol/L; serum calcium concentrations 4.03 mmol/L and 3.8 mmol/l respectively. Following surgery there were no clinical manifestations of hypocalcaemia and no need for intravenous calcium supplementation. Within one year hypercalcaemia reoccurred and metastatic disease was confirmed. In both patients multiple endocrine neoplasia was excluded and chromogranin was repeatedly negative.

Conclusion

Younger age, lack of chronic consequences of hypercalcemia and hyperparathyroidism, no signs of sever symptomatic hypocalcaemia following surgery and no need for postoperative calcium supplementation could be clinical predictors of parathyroid gland carcinoma recurrence.



Pathology image of parathyroid carcinoma.
A: Mitotic cells
B: Infiltrating skeletal muscle

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