Clinical case of chronic calcific pancreatitis in a patient with primary hyperparathyroidism caused parathyroid carcinoma
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Introduction
Parathyroid carcinoma is a rare cause of primary hyperparathyroidism (PHPT) and is usually presented with severe hypercalcemia and parathyroid hormone (PTH) elevation. Hypercalcemia can lead to calcification of parenchymatous organs, including pancreas, and acute or chronic pancreatitis.

Case description
A 46-year-old woman was admitted to the endocrine surgery department of our institution with severe weakness, appetite and weight loss (25 kg in a year), abdominal and joint pain, apathy, skin dryness. Laboratory tests: PTH 2517.4 pg/ml (11-62), total serum calcium 3.36 mmol/l (2.2-2.6), ionized serum calcium 2.14 mmol/l (1.12-1.32), amylase 1280 U/l (<100). Neck US: left lobe of thyroid gland is presented with a heterogenous nodule with cystic degeneration, 5.0x3.0x3.5 cm. Neck CT-scan (Fig. 1): a 37x26x51 mm mass near the back margin of left thyroid lobe, 53 HU density in the native examination, 64 HU in the arterial phase of contrast examination and 50 HU in the venous phase. The upper pole of the tumor is located at the thyroid cartilage, the lower pole of the tumor is in the mediastinum.

At first, parathyroid tumor resection and hemithyroidectomy were performed. After the surgery PTH lowered to 193 pg/ml and hypocalcaemia (total Ca 1.91 mmol/l, ionized Ca 0.94 mmol/l) occurred, treated with calcium and vitamin D supplement. Parathyroid carcinoma was confirmed by histology (Fig. 3).

2 months later subtotal distal pancreatectomy and splenectomy were performed. 3 months after the treatment the patient’s health improved, abdominal pain disappeared and she gained 5 kg. PHPT is not persisting.

Conclusion
This case report shows that chronic calcific cystic pancreatitis can develop on the background of hypercalcemia and improve after parathyroid tumor resection. We suggest that serum calcium and PTH should be measured in all patients with non-alcoholic and non-biliary pancreatitis for PHPT diagnostic and pancreatitis should be diagnosed in all patients with PHPT.

References