

Abstract: It was shown that patients with primary hyperparathyroidism (PHPT) have higher prevalence for development of various cardiovascular diseases. In 80% of the cases, one abnormal parathyroid gland causes PHPT, and usually it is benign neoplasm, or adenoma, or rarely carcinoma. We present a 57-year old man that for 20 years decreased his body height for 15 cm, and that aggravated pain in the spine, developed deformities in the chest and spine, and performed spontaneous fracture of the right hip. Performed biochemical analyses revealed serum calcium and phosphorus that ranged from 2.19 to 3.01 and from 0.68 to 1.0 mmol/l, respectively, and a high concentration of iPTH (1289.4 pg/ml). X-ray examination verifies advanced osteoporosis of the bones of the skull, chest, pelvis and hip while ultrasound examination pointed on the 15 mm formation in the projection of the parathyroid gland. A carcinoma of the 25 mm in diameter originated from the right lower parathyroid gland was surgically removed. This tumor infiltrated the surrounding structures as right thyroid lobe, recurrent nerve, and oesophagus. Patient established normal calcium levels using 6.4 grams of the elementary calcium. On the eight postoperative day, patient developed an acute heart failure that was treated symptomatically. Development of the acute heart failure was the most probably due to the action of PTH or PTH-related peptide, and serum calcium on the different cellular mechanisms as it is activation of the protein kinase A and C, or by increased sympathetic heart stimulation due to the release of norepinephrine.

Key words: Primary hyperparathyroidism, carcinoma, osteoporosis, cardiovascular disease, heart failure.