



Congress Abstract

Clinical Case of a Hemodialysis Patient with Secondary Hyperparathyroidism After Subtotal Parathyroidectomy

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ABSTRACT

Patient T., 43 years old. End-stage chronic kidney disease (CKD) was diagnosed in 2013, and emergency kidney replacement therapy with maintenance hemodialysis was initiated. Prior to this, the patient had not been followed by a nephrologist. Throughout the course of hemodialysis treatment, the patient failed to comply with medical recommendations regarding regular laboratory monitoring of mineral metabolism.

In 2024, a markedly elevated parathyroid hormone (PTH) level (>1,935 pg/mL; October 2024) was detected for the first time. The patient had not received any specific medical therapy. Clinical manifestations included generalized weakness, bone and joint pain, impaired mobility (waddling gait), and skeletal deformities involving the sternum and tibial bones.

Scintigraphy performed on December 13, 2024, demonstrated increased functional activity of all four parathyroid glands (Figure 1). Despite prolonged combined medical therapy with cinacalcet 90 mg/day and paricalcitol 15 µg three times weekly, laboratory markers of calcium-phosphate metabolism continued to deteriorate, with the PTH level rising to 2,338 pg/mL. Bone mineral density assessment by dual-energy X-ray absorptiometry (DXA) revealed a Z-score of -5, consistent with severe secondary osteoporosis (Figure 2).

In December 2024, the patient underwent cervical exploration with removal of the hyperplastic left superior, left inferior, and right inferior parathyroid glands at Poytaxt Medical Clinic. In the postoperative period, a significant reduction in serum PTH was observed, decreasing to 492 pg/mL (December 27, 2024) compared with the preoperative level of 2,338 pg/mL.

During the one-year follow-up after parathyroidectomy, the patient's condition remained stable, with no recurrence of hyperparathyroidism. As replacement therapy, the patient has been receiving long-term calcium supplementation and alfacalcidol.

Biochemical blood tests performed in August–September 2025 demonstrated total serum calcium levels ranging from 1.79 to 2.71 mmol/L (reference range: 2.1–2.6 mmol/L) and serum phosphorus levels of 1.0–1.15 mmol/L (reference range: 0.81–1.45 mmol/L).

In November 2025, dysfunction of the patient's arteriovenous fistula (AVF) resulted in complete loss of vascular access. The exact etiology could not be established because of insufficient diagnostic evaluation; however, vascular wall calcification was considered a possible contributing factor. A temporary central venous catheter was inserted for hemodialysis, followed by successful creation of a new arteriovenous fistula.

According to the most recent laboratory evaluation performed on January 7, 2026, the PTH level remained within the target range (200 pg/mL), serum phosphorus was 0.98 mmol/L, and alkaline phosphatase was 410.5 U/L.

Conclusion: This clinical case illustrates the consequences of delayed diagnosis and inadequate management of secondary hyperparathyroidism, resulting from both poor patient adherence to treatment and systemic healthcare limitations, including insufficient long-term follow-up, limited access to regular laboratory monitoring, and shortcomings in the standard management of maintenance hemodialysis patients.

Although parathyroidectomy is effective in improving quality of life and reducing cardiovascular mortality, it is associated with postoperative complications and is generally performed only in advanced stages of the disease, when irreversible disorders of mineral and bone metabolism have already developed.

Therefore, early diagnosis and timely initiation of long-term medical therapy remain the cornerstone of secondary hyperparathyroidism management, allowing better disease control and reducing the need for surgical intervention.

Keywords: Secondary Hyperparathyroidism; Chronic Kidney Disease; Maintenance Hemodialysis; Parathyroidectomy; Case Report

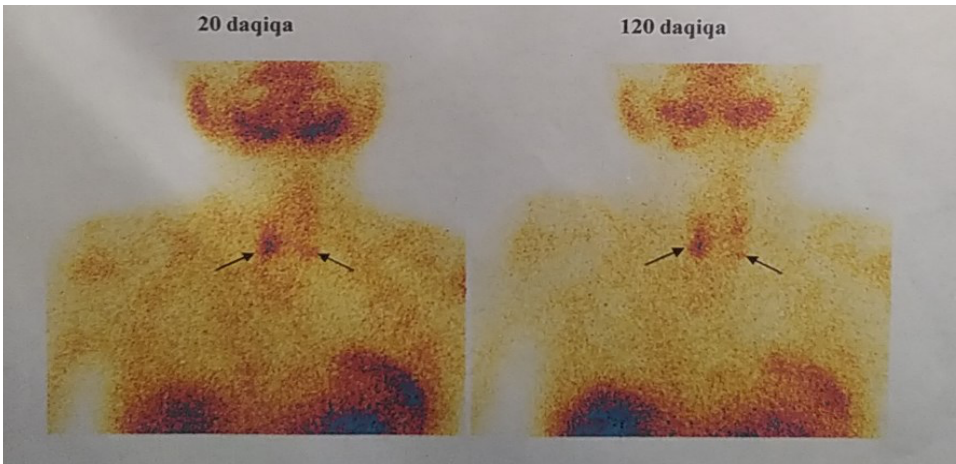


Figure 1.

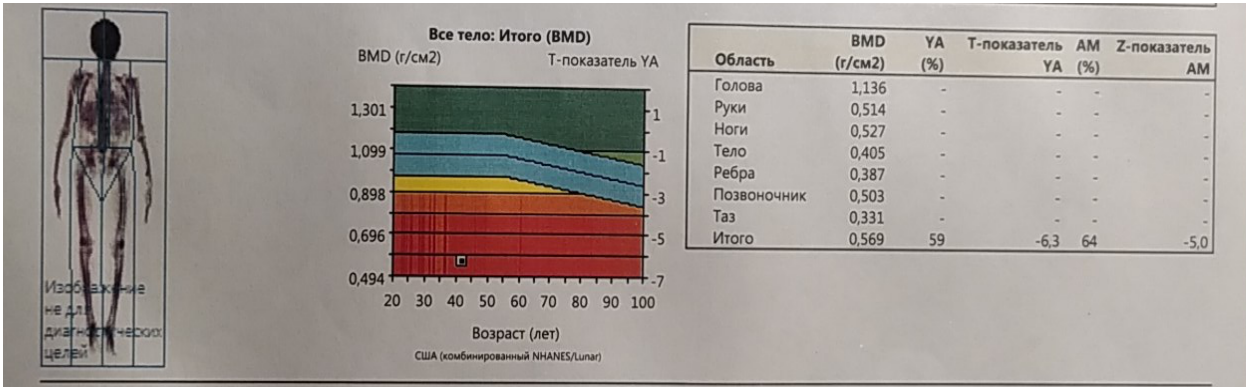


Figure 2.