World Academy of Science, Engineering and Technology
International Journal of Bioengineering and Life Sciences
Vol:17, No:05, 2023

Management Problems in a Patient With Long-term Undiagnosed Permanent Hypoparathyroidism

Authors : Babarina Maria, Andropova Margarita

Abstract : Introduction: Hypoparathyroidism (HypoPT) is a rare endocrine disorder with an estimated prevalence of 0.25 per 1000 individuals. The most common cause of HypoPT is the loss of active parathyroid tissue following thyroid or parathyroid surgery. Sometimes permanent postoperative HypoPT occures, manifested by hypocalcemia in combination with low levels of PTH during 6 months or more after surgery. Cognitive impairments in patients with hypocalcemia due to chronic HypoPT are observed, and this can lead to problems and challenges in everyday living: memory loss and impaired concentration, that may be the cause of poor compliance. Clinical case: Patient K., 66 years old, underwent thyroidectomy in 2013 (at the age of 55) because of papillary thyroid cancer T1NxMx, histopathology findings confirmed the diagnosis. 5 years after the surgery, she was followed up on an outpatient basis, TSH levelsonly were monitored, and the dose of levothyroxine was adjusted. In 2018 due to, increasing complaints include tingling and cramps in the arms and legs, memory loss, sleep disorder, fatigue, anxiety, hair loss, muscle pain, tachycardia, positive Chvostek, and Trousseau signs were diagnosed during examination, also in blood analyses: total Ca 1.86 mmol/l (2.15-2.55), Ca++ 0.96 mmol/l (1.12-1.3), P 1.55 mmol/l (0.74-1.52), Mg 0.79 mmol/l (0.66-1.07) - chronic postoperative HypoPT was diagnosed. Therapy was initiated: alfacalcidol 0.5 mcg per day, calcium carbonate 2000 mg per day, cholecalciferol 1000 IU per day, magnesium orotate 3000 mg per day. During the case follow-up, hypocalcemia, hyperphosphatemia persisted, hypercalciuria15.7 mmol/day (2.5-6.5) was diagnosed. Dietary recommendations were given because of the high content of phosphorus rich foods, and therapy was adjusted: the dose of alfacalcidol was increased to 2.5 mcg per day, and the dose of calcium carbonate was reduced to 1500 mg per day. As part of the screening for complications of hypoPT, data for cataracts, Fahr syndrome, nephrocalcinosis, and kidney stone disease were not obtained. However, HypoPT compensation was not achieved, and therefore hydrochlorothiazide 25 mg was initiated, the dose of alfacalcidol was increased to 3 mcg per day, calcium carbonate to 3000 mg per day, magnesium orotate and cholecalciferol were continued at the same doses. Therapeutic goals were achieved: calcium phosphate product <4.4 mmol2/l2, there were no episodes of hypercalcemia, twenty-four-hour urinary calcium excretion was significantly reduced. Conclusion: Timely prescription, careful explanation of drugs usage rules, and monitoring and maintaining blood and urine parameters within the target contribute to the prevention of HypoPT complications development and life-threatening events.

Keywords : hypoparathyroidism, hypocalcemia, hyperphosphatemia, hypercalciuria
Conference Title : ICCDMDR 2023 : International Conference on Cardiovascular, Diabetes, and Metabolic Disorders Research
Conference Location : London, United Kingdom
Conference Dates : May 15-16, 2023