

Postoperative Hypoparathyroidism in Patients After Total Thyroidectomy - Experience of a Tertiary Center in Romania

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Abstract

Background: Post-surgical hypoparathyroidism (PoSH) is a common long-term complication after thyroid surgery. The reported median (range) incidence rates of temporary and permanent PoSH was 27% (19– 38%) and 1% (0– 3%) respectively.

Material and Methods: We retrospectively analyzed the files of 552 patients who underwent thyroidectomy in our surgery department between 2015- 2017 with the aim to assess the prevalence of PoSH and to identify patient and disease related factors associated with postoperative hypocalcemia.

Results: 171 (30.97%) patients developed PoSH, 88.37% transient, 11.63% permanent. The median (IQR) duration of postoperative hypocalcemia was 60 (67.5) days. Preoperative biological parameters were similar in PoSH and the control group, except median (IQR) serum magnesium level that was significantly higher in PoSH group [2.04 (0.17) vs. 1.89 (0.28) mg/dl, p=0.005]. In the subgroup of patients with thyroid carcinoma the surgery duration was longer in PoSH patients compared to the control group [135 (60) vs. 110 (43) minutes, p=0.020]. In patients with PoSH, median post-operative serum calcium was significantly higher in patients with reported difficult surgery [8.2 (0.2) vs. 7.9 (0.6) mg/dl, p=0.043] and the mean serum calcium decrease was higher in patients with cervical neck dissection and lymphadenectomy (1.94±0.59 vs. 1.68±0.56 mg/dl, p=0.033).

Conclusions: Our data show a high prevalence of PoSH that is likely to increase given the rising number of thyroid surgeries being performed. Further research is needed in order to better define this condition, to establish appropriate treatment and preventive measures.

Key words: hypoparathyroidism, thyroidectomy, hypocalcemia