

## The Impact of Hormone Suppressive Therapy on Quality of Life of Patients with Nodular Goiter

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**Abstract :** Background: The effectiveness of hormone suppressive therapy (HST) in patients with nodular goiter (NG) is controversial. The aim of this study was to identify the impact of long-time HST on the Quality of Life (QoL) of patients with NG. Material and Methods: A retrospective analysis of 146 patients with NG showed treated with HST showed that in 38,4% of cases, HST was not effective. Nodules were increased in size and moreover, and new nodules were developed. Statistical procedure identified the predictors of resistant nodules: only one nodule in the left lobe; nodule size >17mm; calcinate within the nodule. 174 patients with NG, by whom predictors of resistant nodules were established, were informed about the results of previous research and surgery was suggested. Eighty-eight patients (the basic group) agreed with surgery and thyroidectomy was led. 86 patients (control group) ignored the suggestion and wished to receive HST. 3, 6 and 12 months after starting HST; control group patients were examined. HST was non-effective and patients, due to developing symptoms, were operated on. Patients in both groups were followed up 3, 6 and 12 months after thyroidectomy. Quality of Life was checked with the SF-36 survey form and compared between groups. The statistical analysis was performed with the non-parametric Mann-Whitney U test and with the Student t-test. P values  $\leq 0.05$  were considered statistically significant. Results and Discussions: QoL of patients in the basic and control groups 3 months after surgery was almost the same. However, Emotional problems severely interfered with patients in a control group with normal social activities with family, friends, and neighbors. The causes were related to the non-effective HST treatment before surgery: stress for forgetting to take drugs timely every day for a long time; blood tests for thyroid hormone level; needle biopsies of nodules for cancer screening and regular ultrasound investigations, which showed that nodules not diminished in size. Changing the treatment method after 1-year non-effective HST and delayed surgery negatively impacted patient's QoL. Social role functioning and mental health in the control group were also impaired and the difference between the results in the basic group was statistically significant ( $p < 0.05$ ). Conclusion: Predictors, such as only one nodule, the width of nodules more than 17mm, and the existence of calcinate within the nodule, are able to forecast the resistant nodules. HST in patients with resistant nodules is non-effective and surgery is suggested in patients with resistant nodules in the thyroid gland. Long time HST has a negative impact on the QoL patient after surgery.

**Keywords :** thyroid gland, nodule, hormone suppressive therapy, quality of life

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