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MODERN SURGICAL TREATMENT DIFFERENTIATED THYROID CANCERS - WHAT HAVE WE ACHIEVED DURING THE LAST TWO DECADES

Introduction: In spite of the fact that thyroid nodules are frequent, thyroid malignancies are rare. The most common are differentiated thyroid cancers, which usually have favourable prognosis due to exact diagnosis, adequate operative procedure followed by adjuvant radioiodine therapy and routine suppressive L-tiroxine administration. Successful treatment of differentiated thyroid cancers is the reason for diminishing the rate of anaplastic tumors.

Material and method: This is a retrospective clinical study on 1845 patients, operated because of differentiated thyroid cancer in Center for Endocrine Surgery, Clinical Center of Serbia, in Belgrade, in period from 1995 to 2008.

Results: Papillary cancer was found in 1650 patients (79%), among which papillary microcarcinoma in 694 smaller than 1cm (33%), follicular cancer in 51 (2%), Hurthle cell cancer in 144 (7%).

Total thyroidectomy was performed in 1249 patients (89%), one side total with opposite subtotal lobectomy in 137, bilateral subtotal lobectomy in 27, one side lobectomy in 399. Neck dissection was performed in 188 cases (15%).

After surgery, recurrent nerve palsy was noted in 25 patients (1.2%), hyperparathyroidism in 24 (1.2%), postoperative bleeding occurred in 7 (0.4%).

Discussion: The most useful preoperative diagnostic procedure is FNA. Unfortunately it is not sufficient for follicular lesions because it cannot distinguish malignant from benign tumors, meaning that all suspected follicular lesions should be operated. Imaging studies, mostly ultrasound, but also CT and MR are used to show tumor, enlarged involved neck and mediastinal lymph nodes.

“Adequate surgical procedure” for thyroid cancer consists of complete tumor excision all together with all reachable lymph node metastases

(en bloc thyroidectomy with central neck dissection between hyoid bone and major mediastinal blood vessels). If jugular lymph nodes are enlarged, modified lateral neck dissection should be performed. Extended procedures should not be performed if the same result could be achieved with less aggressive procedures. The size of the incision is to be distinguished from the extension of surgery: extensive procedure can be performed even through a small incision while an inadequate procedure is performed if a remnant is left in the field even through a large incision. Complications are rare in specialized centers (about 1%).

If malignancy is spread beyond local field, even the most extensive surgery cannot control it. Adjuvant radioiodine therapy is to be applied in patients with positive whole-body radioiodine scan after surgery otherwise the results of treatment are less favourable. After primary treatment, all patients receive L-thyroxin in suppressive doses. In aggressive tumor types that do not bond iodine, external beam radiotherapy and chemotherapy should be applied.

In patients with risk inheritance, accumulated malignant potential, history of irradiation, prolonged stimulation with cancer risk factors, in dubious nodules in hypothyroid or endemic goiter, prophylactic thyroidectomy should be considered.

Conclusion: Surgery of most thyroid differentiated malignancies is effective and safe if all adequate procedures and modalities are performed.