

## **SPECIAL FEATURES OF THE STRUCTURAL CHANGES OF THYROID GLAND IN CHILDREN**

**Abstract:** The term goiter refers to any enlargement of the thyroid gland, diffuse or nodular. Estimates of the incidence of goiter in apparently healthy school-age children range from 1.9% to 6.8%. There are four main causes of diffuse children goiter: thyroiditis, exposition to environmental goitrogens, familial goiter and inadequate TSH secretion syndrome. The most frequent types of diffuse goiter are seen in Hashimoto thyroiditis and Graves's disease. The term nodular goiter refers to enlargement of the thyroid with deformation of the normal parenchymal structure by the presence of one (uninodular goiter) or more (multinodular goiter) thyroid nodules. They are rare in children (estimated frequency of 0.05% – 1.8%) and common in adults, but the prevalence of cancer among children with thyroid nodules (5% to 33%) is two to fourfold greater than in adults. Thyroid carcinoma is the third most common solid malignancy of childhood. Some thyroid cancers arise from the thyroid follicular epithelium – papillary (most frequent), follicular, and insular carcinomas, some from nonfollicular epithelium – medullary thyroid carcinoma. Clinical presentation and therapy of diffuse goiter is indeed presentation and therapy of the basic disease – Hashimoto or Graves. There is no specific clinical presentation of any nodular goiter, including cancer. The signs of thyroid dysfunctions or compressive symptoms from tumor are rare. There are three main diagnostic approaches: laboratory findings (T3, fT4, TSH, TPO-Ab, thyroglobulin, calcitonin), ultrasonography and fine needle aspiration biopsy like ultimate one. Thyroid radionuclear scanning findings provides little information. Total or near total thyroidectomy is the most acceptably therapeutic approach for nodular goiter.