**Objectives:**

**Background:** Differentiated thyroid cancer (DTC) accounts for 1.5-3% of all tumors in childhood. DTC in pediatric age might have peculiar course and prognosis.

**Aim:** To compare clinical, biochemical and ultrasound (US) features at diagnosis, histological grading and outcome in two groups of children and young adults with DTC.

**Methods:**

Clinical, biochemical and imaging characteristics of 63 patients with DTC, diagnosed between 1999 and 2014 in our hospital, were retrospectively evaluated. Patients were divided in 2 groups according to age at DTC diagnosis: group A including 18 patients aged ≤18 years (mean age 15.4 ± 2.8); group B including 45 patients aged between 19 and 30 years (mean age 25.9 ± 2.7). All patients underwent both surgery and radioactive iodine therapy. Follow-up period was 6.7±3.3 years for group A patients and 5.2±3.2 years for those in group B (p>0.05).

**Results:**

1. Tumor size (p<0.01) and metastasis rates (p<0.03) at diagnosis were higher in group A.
2. The severity of lymph node involvement, as assessed by clinical and US evaluations, was higher in group A (p=0.045).
3. Association with Hashimoto’s thyroiditis (HT) and thyroid dysfunction biochemical signs were more frequent in group A (p=0.045 and p=0.02 respectively).
4. Tumor recurrence rate and free survival rate were similar in the two groups.

**Conclusions:**

DTC in children presents with a clinical and biochemical picture which differs from the one observed at presentation in young adults, due to following findings:

1. More frequent association with HT;
2. More severe lymph node involvement;

**References:**

1. Management Guidelines for Children with Thyroid Nodules and Differentiated Thyroid Cancer. The American Thyroid Association Guidelines Task Force on Pediatric Thyroid Cancer, Thyroid. 2015 Apr 21.
2. Thyroid Carcinoma in Children and Adolescents—Systematic Review of the Literature, Fernanda Vaisman, Rossana Corbo, and Mario Vaisman, 2011 Journal of Thyroid Research
3. Hashimoto’s thyroiditis and Papillary Thyroid Carcinoma: is there a correlation?, Bojana J., J clin Endocrinol Metab, February 2013, 98(2):474-482