

0118 - DIFFERENTIATED THYROID CARCINOMA IN CHILDHOOD CANCER SURVIVORS: A SINGLE-CENTER EXPERIENCE

Mode: Research paper

Thematic Unit: Thyroid

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Background/Objectives: Improved survival in childhood cancer has increased the incidence of second malignancies, including differentiated thyroid carcinoma (DTC). Our aim was to describe the characteristics of DTC occurring as a second malignancy in childhood cancer survivors followed at a tertiary referral center.

Methods: A retrospective descriptive study was conducted, including 206 pediatric patients diagnosed with DTC between 2005 and 2026. Clinical, pathological, ATA 2015 initial risk of recurrence (IRR), and outcome data were evaluated in patients with DTC as a second malignancy.

Results: 19/206 (9.2%) patients developed DTC as a second malignancy. Three patients had DICER1 syndrome and were analyzed separately. Among the remaining patients (n=16), the median age at primary cancer diagnosis was 4.4 years (1-10.6). Female-to-male ratio was 1.3:1. Primary malignancies included medulloblastoma (n=4), acute lymphoblastic leukemia, Hodgkin lymphoma (n=3 each), rhabdomyosarcoma (n=2), and endodermal sinus tumor, hepatocellular carcinoma, pineoblastoma, and adrenal neuroblastoma (n=1 each). 68.5% of patients had received radiotherapy with neck exposure plus chemotherapy, while 25 received chemotherapy alone. In one patient, exposure to ionizing radiation due to repeated CT scans was the only identifiable risk factor. The median time from primary malignancy to DTC was 9.9 years (range 2.9

Conclusion: DTC as a second malignancy represented a significant proportion of the cases. It showed a multifactorial etiology including radiotherapy, chemotherapy, cumulative diagnostic radiation exposure, and genetic predisposition. Ultrasound enabled early detection, avoiding aggressive treatments. Outcomes were excellent in all cases. Studies including a larger number of samples are needed to evaluate molecular behavior.

