

SURGICAL MANAGEMENT OF DIFFERENTIATED THYROID CANCER IN CHILDREN AND ADOLESCENTS. A MULTICENTRIC STUDY OF 160 PATIENTS.

Spinelli, Claudio¹; Peronace, Giuseppina¹; Papini, Piermarco¹; Miccoli, Paolo¹; Antonelli, Alessandro¹; Ferrari, Andrea²; Massimino, Maura²; Inserra, Alessandro³; Bisogno, Gianni⁴; Cecchetto, Giovanni⁴

¹Department of Surgery Pathology, Molecular and Critical Area, University of Pisa, Italy; ²Pediatric Oncology Unit, Istituto Tumori, Milano, Italy; ³“Bambino Gesù” Pediatric Hospital Department of Surgery, Rome, Italy; ⁴Department of Pediatrics, Division of Pediatric Surgery, University of Padova, Italy

Background/Purpose: Currently the extension of thyroid surgery in DTC in pediatric age is subject of great attention and debate. The most common treatment is the total thyroidectomy with or without central neck dissection and in case of clinical evidence of nodal involvement laterocervical lymphadenectomy. The operation is followed by radiiodine therapy and lifelong hormone replacement therapy. The radical surgical approach is associated with a substantial decrease of DTC recurrences but with a higher percentage of postsurgical complications. Some specialists in some particular cases prefer the most conservative approach.

Methods: In a multicentric Italian Study, TREP Project (Tumori Rari in Età Pediatrica), we review data of 160 DTC patients (median age 14, range 4-18) that underwent surgery from January 2002 to December 2012. 140 patients underwent total thyroidectomy associated in 72 cases (45%) with a cervical lymphadenectomy; 20 patients and considered low-risk DTC with carefully preoperative staging underwent a single hemithyroidectomy. The median follow-up was 6 years (range 5-11 years).

Results: In the group that underwent radical approach we recorded 24.5% cases of postoperative complications that included hypoparathyroidism (58.0% transient and 23.7 % permanent) and recurrent laryngeal nerve injury in 13.5% (unilateral 8.1%, bilateral 5.4%). Recurrences occurred in 16 patients; in 10 cases lymphnodes were involved and the lungs in 4 cases, local recurrences in 2 cases. This recurrences occurred between the 6th and 20th month after surgery (peak incidence around the 12th month). No complications and local recurrences occurred in the conservative surgery group.

Discussion & Conclusion: It is necessary to perform a carefully preoperative staging of DTCs in children for identifying low-risk cases to can perform conservative surgery.