ANAPLASTIC THYROID CARCINOMA: THERAPEUTIC STRATEGY

Spinelli, Claudio[1]; Peronace, Giuseppina[1]; Papini, Piermarco[1]; Fregoli, Lorenzo[1]; Antonelli, Alessandro[2]; Miccoli, Paolo[2]
[1]Department of Surgery Pathology, Molecular and Critical Area, University of Pisa, Italy; [2]Department of Surgery, Medical, Molecular, and Critical Area Pathology, University of Pisa, Pisa, Italy,

Background/Purpose: Anaplastic thyroid cancer (ATC) is a rare aggressive tumor arising from the follicular cells that do not retain any of the biological features of the original cells, such as uptake of iodine and synthesis of thyroglobulin.
Methods: From January 2011 to March 2013, 10 patients with median age 70 years old (range 56-84), 2 male and 8 female, underwent surgery for a ATC. In 5 patients ATC arised *de novo*, in 2 from a goiter (a 10 years old goiter treated with levotiroxina in one case and another one treated by radioiodine therapy for hyperthyroidism); in the remaining 3 cases ATC developed in patients treated with a total thyroidectomy for a well differentiated follicular carcinoma respectively 30 years, 2 years and 6 months before. All patients presented rapidly enlarging mass that was firm and fixed and local compressive symptoms such as dysphonia, dyspnea and, lately, dysphagia in addition to neck pain and tenderness.
Results: A total thyroidectomy has been performed in 4 cases while in the other 6 only a biopsy of the mass. All patients had extrathyroidal extension and 3 cases had widely metastatic disease.
3 patients underwent chemio- and radiotherapy after surgery. Only two patients are still alive at 10 and 3 months after surgery. In the other patients we recorded a median survival of 4 months (range 2-9).
Discussion & Conclusion: ATC is a fatal disease unresponsive to traditional therapies. Treatment of ATC has not been standardized. Novel therapeutic stategies are urgently needed. Promising future directions include the clinical and molecolar characterization of patients with ATC and use of thyrosine kinase inhibitors, Aurora-Kinase inhibitors and peroxisome proliferator-activited receptor-gamma agonists.