Editorial

Thyroid cancer: is really less more?

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Abbreviations: PMC, papillary thyroid micro carcinomas; EFVPTC, encapsulated follicular variant of papillary thyroid carcinoma; NIFTP, non-invasive follicular thyroid neoplasm with papillary

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Thyroid carcinoma is the most common endocrine malignancy accounting for about 3% of all human cancers. A consistent increase in its incidence has been reported in the past years across different ethnic population and the estimated number of incident cases would be 64,300 in USA alone in 2016.[1] Despite this increase, disease-specific mortality remained stable and it is the lowest among the most common human cancers.[1] This apparent discrepancy may be explained to the fact that the increase in the incidence is largely attributable to the increased detection of small indolent thyroid tumors,[2,3] a finding consistent with the high prevalence of thyroid cancer in autopsy series, particularly papillary thyroid micro carcinomas (PMC). Moreover, this increase may also reflect a change in routine diagnostic approach followed in patients with thyroid nodules and specifically the widespread adoption and use of fine needle aspiration.[4] As a result of the "over diagnosis" of these small indolent tumors, the excellent prognosis and clinical outcome of these patients and a non-negligible percentage of surgical complications, there is growing evidence to suggest active surveillance as an alternative to immediate surgery in a specific subgroup of patients.[5,6] It comes as no surprise that the aforementioned alternative therapeutic approach in specific subtypes of thyroid cancer has been recently advocated by the findings of a multidisciplinary, retrospective study of patients with thyroid nodules diagnosed as encapsulated follicular variant of papillary thyroid carcinoma (EFVPTC) and reclassified as "non-invasive follicular thyroid neoplasm with papillary-like nuclear features" (NIFTP).[7]

However, the characterization of the growth potential of thyroid cancer and the prediction of the time in which clinical significant progression may happen is not straight forward as yet and therefore, active surveillance should be carefully evaluated on a case by case basis. Age would certainly be a significant factor to be taken into account, considering that the higher prevalence of distant metastases in this particular subgroup and the fact that early diagnosis of micro metastatic disease in young patients could lead to the definitive cure of disease with radioiodine (RAI) treatment. Of note, the latter treatment modality is the most sensitive method for the detection of distant metastatic disease as well as a unique solution to date for the cure of micro metastatic disease.

In conclusion, considering the high rate of thyroid carcinomas in autopsy series and the observation that several subtypes of thyroid tumors are unlikely to progress significantly in the medium-short term follow-up, active surveillance might be considered as an alternative to immediate surgery in carefully selected cases, followed-up in a setting of prospective well-designed long-term clinical trial. However, a universal adoption of active surveillance in all PMC, irrespective of subtype, histological phenotype, localization of the disease and age is certainly out of question, especially in young patients and in those that have a long life expectancy.

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Conflicts of interest

The author declares there is no conflict of interest.

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