

Papillary thyroid microcarcinoma: how deal with this epidemic?

Editorial

Papillary thyroid microcarcinoma (PTmC), encompassing any papillary thyroid carcinoma (PTC) measuring 10 mm or below in greatest dimension. In the last four decades, trend incidence of PTC, especially the microtumors, is increasing in several epidemiological studies around the world.¹⁻³ Microcarcinomas are usually an incidental finding, increasing found on imaging or on histology of thyroidectomy specimens. The term incidental refers to a tumour that is not the target lesion and is found on histological examination of a thyroid removed for another reason, for instance nodular goitre. These lesions nearly always are of papillary form.

Despite its high incidence and prevalence, PTmC rarely cause of death. Most patients with these lesions have an excellent prognosis, since these tumours follow a highly indolent course they have been denoted as low risk thyroid cancer,⁴ however, owing to uncertainty about definition, epidemiology, and management of these kind of cancers, many patients receive similar care to that for more aggressive thyroid cancers. The acronym VOMIT which stands for Victims of Modern Imaging Technologies, describes this situation.⁵ New evidence has led to a better understanding of this condition and may herald a revolution in its management.

Review of several studies revealed the clinical and histopathological characteristics of the PTmC, 28% of patients had multifocal tumours, 18% bilateral tumours, 12.5% extrathyroidal invasion, 10.7% lymph node extension, 3.3% distant metastasis, 4.2% tumour recurrence and only 0.2% mortality related with the PTmC.⁶

Information on the spontaneous evolution of PTmC comes from the classic studies by Ito et al.,^{7,8} which include patients with no incidental PTmC, attended in the period 1993-2011. All cases diagnosed by fine needle aspiration biopsy (FNAB) guide by echography. Patients with lymph node invasion, those with tumour located adjacent to trachea and those with nodules having histopathology features of high-grade malignancy were excluded. At 10-years of followed-up, from the 1235 patients included in the study, 8% of patients showed tumour enlargement by 3 mm or more, 6.8% of patients tumour size become greater than 10 mm and only 3.8% of patients showed novel appearance of lymph-node invasion.

Regarding to post surgical outcome of PTmC, the experience of the Mayo Clinic is very demonstrative. Hay et al.,⁹ studied longitudinally 900 cases of PTmC attended in the mentioned institution from 1945 to 2004. They observed that all-cause survival of these patients is similar as expected survival of persons of like age and sex based. More than 99% of patients had not distant spread or mortality. Only 0.3% cases died related to PTmC. The cumulative risks of tumour recurrence development at any site were 5.5% at 20 years of followed-up. Thus in the management of the PTmC the problem is the tumour recurrence.

Several groups of researchers have tried to established what clinical or histopathological characteristics of the PTmC determinates the outcome of these patients.^{4,10-14} They evaluated the prognosis

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value of: age, gender, tumour size, incidental tumour, multifocal tumour, lymph-node extension, and molecular characteristics such as BRAF mutation. In resume, the outcome of PTmC showed the more consistent association with lymph-node invasion and incidental tumours, being the first predictor of recurrence, while the second is predictor of a very good prognosis.

The fact that the majority of PTmC have very good prognosis promote that several authors¹⁵⁻¹⁷ and the guidelines from different institutions recommend conservative treatment for these tumours.¹⁸⁻²²

Based on the aforementioned information, the appropriate treatment for unifocal PTmC without other risk factors, mainly lymph-node involvement, should be lobectomy, with the option of observation without surgery. Neither adjuvant radioiodine therapy nor use of suppressive doses of L-Tiroxine, in cases required this treatment, are recommend. Respect to the follow-up, would be based on image techniques, mainly ultrasonography during 5 years, with the option for these patients of no further follow-up for cancer and can be discharged to the care of their general practitioner.²³

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Conflict of interest

The author declares there is no conflict of interest.

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