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Editorial

Noninvasive Follicular Thyroid Neoplasms with Papillary Like Nuclear Features (NIFTP) Birth of a New Entity-An Attempt to Prevent Cancer Overdiagnosis

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There is a worldwide emphasis on preventing overdiagnosis of disease. Overdiagnosis is defined as the diagnosis of a disease or condition that is unlikely to ever cause harm.[1] Overdiagnosis is a huge problem which has serious consequences for the patients as well as health care system. For the patients, these include unnecessary treatment with consequent adverse effects and unnecessary monetary burden, as well as the psychological trauma. For health care system, it causes waste of precious resources and unduly increased work load for the health professionals. Such is the global concern for this problem that since 2013, health professionals from all around the world gather for "Preventing Overdiagnosis" conference, held every year. Cancer overdiagnosis has a much greater potential for harm due to its enormous psychological trauma, arduous treatment protocol, rife with life threatening complications and staggering cost for the patient and healthcare system.[2]

As a result, work is ongoing in various fields to identify cancers which have excellent prognosis and have shown to have an indolent disease-free course, with prolonged clinical trials. One such success story is recent revision of nomenclature for 'Encapsulated Follicular Variant of Papillary Thyroid Carcinoma (EFVPTC)." For a long time, it was felt that EFVPTC has a much more indolent behavior than its infiltrative counterpart. But traditionally, all tumors with characteristic nuclear features of papillary thyroid carcinoma (PTC) were designated as carcinomas and treated as such. To address this issue, an international panel of expert pathologists and clinicians from around the world were assembled to review a set of cases with adequately long follow-up, to see if this group can be re-classified according to its behavior.[3]

The Endocrine Pathology Society working group, comprising of 24 experienced thyroid pathologists from 7 countries, reviewed 268 cases of EFVPTC. These cases were divided into 2 groups, those with capsular or vascular invasion and those showing no invasion. The results of this study showed that patients with noninvasive EFVPTC, followed up for a median period of 13 years, were all alive and disease-free despite the fact that majority of these patients did not undergo total thyroidectomy and none received radioactive iodine (RAI). The study recommended that this group of cases should not be designated as "carcinoma" and proposed the term, "noninvasive follicular thyroid neoplasms with papillary-like nuclear features" (NIFTP).[3] The study and its recommendations have been hailed around the world as a step in the right direction. Most centers dealing with thyroid cancer cases are now using this terminology and have modified their treatment protocols. It is however imperative that this diagnosis should only be rendered after extensive, preferably entire / complete sampling of the capsule, to rule out any focus of invasion.

An important related issue, not directly addressed in this study, is the diagnosis of these lesions on Fine Needle Aspiration (FNA) cytology. Traditionally, on FNA cytology, lesions showing cells with characteristic nuclear features of PTC, but with follicle formation without any papillary structures, were diagnosed as follicular variant of papillary thyroid carcinoma or suspicious for malignancy, since they were considered as carcinoma whether they were invasive or noninvasive. But now, since it has been established that this group termed NIFTP is not malignant, such lesions on FNA should be labeled as suspicious for malignancy or follicular neoplasm/suspicious for a follicular neoplasm[4] with a comment that differential diagnosis includes FVPTC, EFVPTC and NIFTP. This important development will hopefully further invigorate efforts to identify cancers which are being over diagnosed and to re-classify them, in order to remove the psychological stigma, and to reduce treatment related adverse effects and medical expenses.

References

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