The management of the solitary thyroid nodule

Khalid Mohammed Aly El Sayed

The management of the clinically solitary nodule of the thyroid gland aims at the diagnosis of different pathological types of the nodule and at the different lines of treatment. The incidence of the solitary thyroid nodule is around 4% . Large majority of these nodules are benign and cancer is found only in a minority of these cases. The aim of investigation is to detect those malignant lesions to select them for surgery. Regarding the management , a good history must be followed by a full clinical examination. There was a great stress on the methods of investigations, especially those that were recently introduced as ultrasonagraphy, thyroid scanning, computerized tomography, positron emission tomography, fine-needle aspiration cytology, thyrocalcitonin assay and DNA content in differentiation of the thyroid neoplasms. In case of thyroid scanning, whilist it is sometimes helpful in cases of thyroid carcinoma, its principal value is in the diagnosis of an autonomous toxic nodule.Ultrasonography of the thyroid gland is much more useful in differentiation between a solitary nodule and multinodular lesions in comparison with physical examination or even isotope imaging. It classifies nodules as solid, cystic or mixed lesions with more than 90% accuracy. However, ultrasonography has a very limited role in predicing the underlying pathology of the nodule. At present, CT is occasionally indicated in the evaluation of thyroid disease. The anatomical structures of the neck and mediastinum that may be involved by thyroid cancer are best evaluated by contrast enhanced C-T scans. Recently, FNAC has replaced ultrasonography as a routine diagnostic technique.Except for the follicular tumor group, FNAC proved to be the best method for differentiating benign from malignant lesion with accuracy reaching 95%. The treatment of solitary thyroid nodule depends mainly on the investigations, but the clinical consideration are still of overriding importance in determining surgical managements.Autonomous nodule is treated by radioactive iodine or surgical resection (a subtotal thyroidectomy, or complete lobectomy). Ultrasonography guided percutaneous intranodular ethanol injection has ceen recently proposed for treating autonomously functioning thyroid nodule (AFTN).A Solitary nodule in a hypothyroid patient suggests Hashimoto’s thyroiditis, thyroxine treatment to the limit of toxic symptoms is advisable.Patients with one or more cold thyroid nodule are evaluated to FNAC results and the cancer risk regarding iodine uptake, sex and age , and the persence of clinical signs suspicious for thyroid cancer. For the cyst, observation for many weeks is indicated.Most cases resolve spontaneously. If it increases in size, exploration is done. Lobectomy is the operation of choice for benign nodules. For malignant nodule, there are two lines of treatment, either total thyroidectomy or lobectomy

and isthmectomy with post operative radioactive iodine 131 which is the recent trend nowadays. Removal of the involved lymph nodes with total thyroidectomy in cases accompanied by lymph node enlargment must be performed.