SUMMARY

The management of the clinically solitary nodule of the thyroid gland aims at the diagnosis of the different pathological types of the nodule and at the different lines of treatment.

In this essay, a mention of the development, and anatomical features of the thyroid gland were first spotted upon.

Then, a shift to the pathology of the different types of the thyroid nodule, mentioning their clinical and microscopic features, was added with differential diagnosis of other swellings misdiagnosed as a solitary nodule of the thyroid gland.

As for the management, a good history must be taken with a full clinical examination. There was stress on the different methods of investigation.

Laboratory investigations including: T_3, T_4, TSH, autoimmune antibodies, serum Calcitonin and serum Thyroglobulin. It is pointed out that laboratory tests give no great help in the evaluation of solitary thyroid nodules.

In case of using thyroid radioactive scanning, while it is sometimes helpful in cases of thyroid carcinomas, its principle value is in the diagnosis of an autonomous toxic nodule.

At present, FNAC has replaced other methods, and became the first and the routine method which must be used in diagnosis of solitary thyroid nodule. It has a great accuracy in identification of different pathologic types and in differentiating benign from malignant lesions, except in the follicular tumor group. The only value of the other methods of diagnosis became in supportive role.

The method of solitary nodule management depends chiefly on the scheme used in the diagnosis and treatment. As for the autonomous toxic nodule, the treatment is either by radioactive iodine or surgical resection.

For the cystic nodules aspiration is both diagnostic and treatment, with post aspiration observation. Thyroid lobectomy is recommended in patient whom a cyst has recurred after three aspirations.

The colloid nodules either observed or suppressed by thyroxin, also surgery is recommended if the nodule grows; only for exclusion of malignancy.

In thyroiditis, the medical treatment takes the upper hand with fewer roles for surgery, which is mainly in the form of tracheal decompression or biopsy taking for assurance of diagnosis.

In follicular neoplasm, subtotal thyroidectomy with histological examination of the nodule is preformed. If adenoma is diagnosed, only thyroxin therapy for suppression is used. But in cases of carcinoma completion thyroidectomy with adjuvant treatment in form of radioactive iodine and suppressive therapy.

In other malignant lesion, total or near total thyroidectomy are performed with adjuvant treatment according to the type of malignancy, except in lymphoma whose response to chemotherapy and external radiation give good results.

Lastly as regard the recent trends in the management of solitary thyroid nodules, most patients until recently have been referred for operative treatment, although surgery is still the main the method of treatment in such patients, the number of patients with solitary thyroid nodules treated surgically is less than in the past.

U.S. guided interstitial laser photocoagulation could become a useful non surgical alternative in the treatment of benign solitary solid cold thyroid nodule in patients who cannot or will not undergo surgery.

Percutaneous ethanol injection under sonographic guided is a relatively safe, low cost, outpatient method of treatment that has been applied successfully as an alternative to surgery for the management of benign and malignant lesions of various tissues and organs. Among endocrine diseases, thyroid nodules; both cystic and solid, have been treated effectively using this technique.

Although conventional open thyroidectomy can be performed with few complications, this approach leaves a visible scar on the anterior surface of the neck in a cosmetically unfavorable location. The endoscopic approach provides a superior cosmetic result when compared to conventional thyroidectomy and results in a quicker return to normal activity. Also provides fantastic magnification of thyroid anatomy, including the recurrent laryngeal nerve, superior laryngeal nerve, and the parathyroid glands.