

Management Approach to Thyroid Cancer in Albania

Igli Kokalari¹ Sokol Buba² Islam Mamica³ Arben Dhima⁴ Teona Berdica-Bushati⁵ Leart Berdica⁵

1.Surgeon at Ragional Hospital of Gjirokastra, Albania

2.Surgeon at Mother Teresa University Hospital Centre, Albania

3.Radiologist, Burrel General Hospital, Albania

4.Radiologjist, Spitali Amerikan Tirane, Albania

5.Anatomopathologist, Mother Teresa University Hospital Centre, Albania

Abstract

Thyroid cancer is a cancer that starts in the thyroid gland. In Albania, thyroid cancer is rare disease, according to available data, which are not solid and up to date data, referred to 2014 to a paper named “Actualities in the Diagnosis and Treatment of Thyroid Cancer in Albania” by D. Gjergji et al., data from Clinic of General Surgery, UHC “Mother Theresa” in Tirana and the Registry of the Department of Pathology during the period 2004 – 2011, there were suspected 262 patients with thyroid tumors and only 42 of them or 16 % were diagnosed with thyroid cancer. Treatment depends on the type of thyroid cancer. Surgery is most often done, the entire thyroid gland is usually removed and if is suspected that cancer has spread to lymph nodes in the neck, these will also be removed. Radiation therapy may be done with or without surgery and it may be performed by; aiming external beam x-ray radiation at the thyroid or taking radioactive iodine by mouth. If the cancer does not respond to surgery or radiation, and has spread to other parts of the body, chemotherapy and targeted therapy are applied. The importance of screening, early diagnosis and there proper treatment possess still challenges in Albania, so better national health programs must be developed in order to offer a better health care service to this medical problem.

Keywords: Thyroid cancer, risk factors, diagnosis, treatment

Introduction

Thyroid cancer is a cancer that starts in the thyroid gland. The thyroid gland is located inside the front of your lower neck.^{1,2} Thyroid cancer can occur in people of any age.¹ Radiation increases the risk of developing thyroid cancer.^{1,2,3} Exposure may occur from; radiation therapy to the neck, especially in childhood; radiation exposure from nuclear plant disasters.^{1, 3, 4} Other risk factors are a family history of thyroid cancer and chronic goiter. There are several types of thyroid cancer; anaplastic carcinoma, also called giant and spindle cell cancer, is the most dangerous form of thyroid cancer, it is rare, and spreads quickly; follicular tumor is more likely to come back and spread; medullary carcinoma is a cancer of non-thyroid cells that are normally present in the thyroid gland. This form of thyroid cancer tends to occur in families; papillary carcinoma is the most common type, and it usually affects women of childbearing age, it spreads slowly and is the least dangerous type of thyroid cancer. In Albania, thyroid cancer is rare disease, according to available data, which are not solid and up to date data, referred to 2014 to a paper named “Actualities in the Diagnosis and Treatment of Thyroid Cancer in Albania” by D. Gjergji et al., data from Clinic of General Surgery, UHC “Mother Theresa” in Tirana and the Registry of the Department of Pathology during the period 2004 – 2011, there were suspected 262 patients with thyroid tumors and only 42 of them or 16 % were diagnosed with thyroid cancer. Treatment depends on the type of thyroid cancer.⁵

Results and discussion

The data gathered from 7 years period 2004 – 2011, there was identified that females were more prevalent to thyroid tumors with ration 3.5 : 1 (F:M), and in regards to anatomopathological finding were 65 % papillary, 25 % follicular, 8 % medullary and 2 % anaplastic, and in regards to overall anatomopathological morphology around 60 % were multinodular and 40 % were uninodular ones. FNAB was accurate in determination of correct diagnosis in over 80 % of cases, where physical examination was coherent with prospective suspected diagnosis in over 75 %.

Screening of targeted population is one of the most up to date approaches, however, this is depending on national health care infrastructure and specialized medical professionals available, in addition to current medical protocols and awareness of population and medical staff regarding this pathology.^{1,6,7}

In cancer care, different types of doctors often work together to create a patient’s overall treatment plan that combines different types of treatments, in other words involves a multidisciplinary team.^{7, 8, 9} For thyroid cancer, this team may include a surgeon, medical oncologist, radiation oncologist, and endocrinologist. Cancer care teams also include a variety of other health care professionals, including physician assistants, oncology nurses, social workers, pharmacists, counselors, dietitians, and others.^{8, 9}

Treatment depends on the type of thyroid cancer. Surgery is most often done, the entire thyroid gland is

usually removed and if it is suspected that cancer has spread to lymph nodes in the neck, these will also be removed. Radiation therapy may be done with or without surgery and it may be performed by; aiming external beam x-ray radiation at the thyroid or taking radioactive iodine by mouth. If the cancer does not respond to surgery or radiation, and has spread to other parts of the body, chemotherapy and targeted therapy are applied.

Thyroid lobectomy is applied unilateral toxic nodule or solitary adenoma or cyst. Total thyroidectomy is used in thyroid carcinoma, Graves' disease, Hashimoto thyroiditis, multinodular goiter, substernal goiter. Neck dissection is employed in locally advanced head and neck carcinoma demonstrated by presence of nodal disease clinically, by preoperative imaging, or by sentinel node biopsy. Absolute neck dissection is practiced randomly scattered dermal metastases precluding a full-thickness dissection, intracranial extension of tumor from the neck, tumor fixation to the skull base or the cervical spine. However, few contraindications exist for thyroidectomy or neck dissection. Relative neck dissection is used in tumor fixation to the internal carotid artery, locally advanced disease in the root of the neck, periosteal invasion of the skull base.

Surgery is most often done, the entire thyroid gland is usually removed and if it is suspected that cancer has spread to lymph nodes in the neck, these will also be removed.^{2, 3, 4, 7, 8, 9} Radiation therapy may be done with or without surgery and it may be performed by; aiming external beam x-ray radiation at the thyroid or taking radioactive iodine by mouth.^{2, 3, 4, 7, 8, 9} If the cancer does not respond to surgery or radiation, and has spread to other parts of the body, chemotherapy and targeted therapy are applied.^{2, 3, 4, 7, 8, 9}

Patients who are treated with surgery usually require thyroid hormone therapy. In addition to replacing the hormone that is needed by the body, the thyroid hormone medication may slow down the growth of any remaining differentiated cancer cells.

Main expected benefits are curative resection for actual or potential malignancy, relief of symptoms caused by toxic or large multinodular goiters, relief of symptoms resulting from benign thyroid disease.^{10, 11, 12, 13}

Potential risks like bleeding that may cause airway compression and require reoperation, recurrent laryngeal nerve paresis or transection causing hoarseness, temporary or permanent, hypocalcemia requiring oral calcium or vitamin D, scarring, infection and need for additional medical or surgical treatment.^{10, 11, 12, 13}

Routine follow up includes clinical assessment of thyroid status and examination of the neck or other relevant systems.^{10, 11, 12, 13} Abnormal masses in the neck or elsewhere should trigger further investigations, which may include fine-needle aspiration cytology.^{10, 11, 12, 13}

Conclusion

Malignant disease of thyroid gland require a multidisciplinary treatment approach, lack of such infrastructure is faced in every day of our medical practice which often creates delays. However, lack of specialized health care staff throughout the country and lack of up to date diagnostic and therapeutic resources makes oncology and onco-surgery service in Albania well behind current standards of care of such nosology. Thyroid cancer is present as medical nosology in our country and we do face challenges in early diagnosis, management and post treatment follow up.

References

1. Laundau, D., Vini, L., Hern, R.A. et al. (2000) Thyroid cancer in children: the Royal Marsden Hospital experience. *European Journal of Cancer*, 36, 214–220.
2. Cady, B. & Rossi, R. (1988) An expanded view of risk group definition in differentiated thyroid carcinoma. *Surgery*, 104, 947– 953.
3. Fernando, R., Mettananda, D.S. & Kariyakarawana, L. (2009) Incidental occult carcinomas in total thyroidectomy for benign diseases of the thyroid. *Ceylon Medical Journal*, 54, 4–6.
4. Cooper, D.S., Doherty, G.M., Haugen, B.R. et al. (2009) Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. *Thyroid*, 19, 1167–1214.
5. Dashamir Gjergji et al. (2014). Actualities in the Diagnosis and Treatment of thyroid Cancer in Albania. *Endocrine Society's 96th Annual Meeting and Expo*, June 21–24, 2014 – Chicago. Presentation Number: SUN-0530, Date of Presentation: June 22, 2014.
6. Giuffrida, D. & Gharib, H. (1995) Controversies in the management of cold, hot and occult thyroid nodules. *American Journal of Medicine*, 99, 642–650.
7. Modigliani, E., Cohen, R., Campos, J.M. et al. (1998) Prognostic factors for survival and for biochemical cure in medullary thyroid carcinoma: results in 899 patients. The GETC Study Group. *Groupe d'étude des tumeurs a calcitonine. Clinical Endocrinology*, 48, 265–273.
8. Frank-Raue, K., Rybicki, L.A., Erlic, Z. et al. (2011) Risk profiles and penetrance estimations in multiple endocrine neoplasia type 2A caused by germline RET mutations located in exon 10. *Human Mutation*, 32, 51–58.
9. De Crevoisier, R., Baudin, E., Bachelot, A. et al. (2004) Combined treatment of anaplastic thyroid

- carcinoma with surgery, chemotherapy and hyperfractionated accelerated external radiotherapy. *International Journal of Radiation Oncology Biology Physics*, 60, 1137–1143.
10. Bhatia, A., Rao, A., Ang, K.K. et al. (2010) Anaplastic thyroid cancer: clinical outcomes with conformal radiotherapy. *Head and Neck*, 32, 829–836.
 11. Smallridge, R.C. (2012) Approach to the patient with anaplastic thyroid carcinoma. *Journal of Clinical Endocrinology and Metabolism*, 97, 2566–2572.
 12. Smallridge, R.C. & Copland, J.A. (2010) Anaplastic thyroid carcinoma: pathogenesis and emerging therapies. *Clinical Oncology (Royal College of Radiologists (Great Britain))*, 22, 486–497.
 13. Chen, J., Tward, J.D., Shrieve, D.C. et al. (2008) Surgery and radiotherapy improves survival in patients with anaplastic thyroid carcinoma: analysis of the surveillance, epidemiology, and end results 1983–2002. *American Journal of Clinical Oncology*, 31, 460–464.