

**WORLD RADIOPHARMACEUTICAL THERAPY COUNCIL
(WRPTC)**

CERTIFICATE OF ATTENDANCE

***1st INTERNATIONAL SYMPOSIUM ON RADIOPHARMACEUTICAL THERAPY
(ISRT-2008)***

In Active Collaboration with
Association of Nuclear Medicine Physicians of India (ANMPI) and
Max Health Care, New Delhi, India

THIS IS TO CERTIFY THAT

DR A. ELLIYANTI

has attended the 1st International Symposium on Radiopharmaceutical
Therapy (ISRT-2008) held from 27th to 30th October 2008

at

Holiday Inn Resort, Goa, India

Prof. A.Perkins
Hon. Secretary
WRPTC

Prof. A.K. Padhy
Chairman
WRPTC

Dr. P. Dougall
Chairman
Organizing Committee

Dr. V.R. Lele
President
ANMPI



Thyroid Adenomas Behave Aggressively During Follow-up



Aisyah Elliyanti^{1,2}, Daan Khambri³

1. DEPARTMENT OF MEDICAL PHYSICS FACULTY OF MEDICINE, ANDALAS UNIVERSITY, PADANG, INDONESIA 2. UNIT NUCLEAR MEDICINE DEPARTMENT OF RADIOLOGY DR. M. DJAMIL HOSPITAL PADANG, INDONESIA. 3. DEPARTMENT OF SURGERY DR. M. DJAMIL HOSPITAL, PADANG, INDONESIA

ABSTRACT

of thyroid cancer patients (20%) has had one of these non cancerous thyroid problems. Adenomas have the largest increase in risk. The aim of this study is to discuss two cases of adenomas goiter that became aggressive during follow-ups. Two patients, with an average age of 64 years, referred to Nuclear Medicine Dr. M. Djamil Hospital in Padang for bone scintigraphy examination during the period of 2007-2008. Both patients had a thyroid surgery several years back for histopathology adenomas. However, after the adenomas removal surgery, the patients did not have proper follow-ups. Now, both of them developed pelvic pain. Bone scintigraphy and radiography showed an increase in the uptake and distruction at the pelvic bone. Thyroid scintigraphy also showed a residual thyroid tissue; in addition to, elevated thyroglobulin serum. These cases highlights the necessity for patients with a risk factor for thyroid cancer to have a undergo a complete follow-up program, detailed and sufficient in length.

Key words : adenomas, thyroid cancer, mutations

BACKGROUND

Thyroid nodules (adenomas) are discrete and solitary. They are derived from follicular epithelium, then they were called as a follicular adenoma. Meanwhile, About 20% of follicular adenomas have point mutations in the RAS family of oncogenes, which have also been identified in 30%-40% of follicular carcinomas. Nodules (adenomas), enlarged thyroid (goiter) and inflammation of thyroid (thyroiditis) are the most important risk factors for thyroid cancer. One in five cases of thyroid cancer (20%) has had one of non-cancerous thyroid problems in the past. Adenomas have the largest increase in risk. The risk is become strong when thyroid nodules had from a young age till 55 year. The aim of this study is to report two cases of adenomas goiter that turned be malignant.

Case Reports

1. A woman had a pelvic bone pain. She was referred to Nuclear Medicine division at Dr. M. Djamil Hospital, Padang. The CT-scan result showed a multiple bone destruction at spina ischiadica anterior superior and ramus superior ossis pubis sinistra with a bone metastases impression. Nine years before, she had thyroid surgery and histopathology result as adenomatous goiter result. She did not have proper follow-ups. The thyroid scintigraphy result showed a residual thyroid tissue (Figure 1). Bone scintigraphy demonstrated an increased uptake at os vertebrae lumbal IV-V, spina ischiadica anterior superior and ramus superior ossis pubis sinistra (Figure 2). The thyroglobulin serum was 2.000ng/mL and TSH was 1.231uIU/mL. Three months later her pelvic bone pain was getting less.

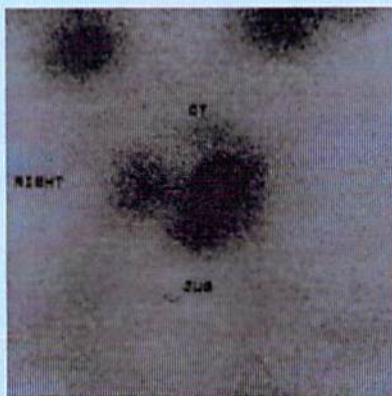


Figure 1: Thyroid scintigraphy showed a thyroid remnant

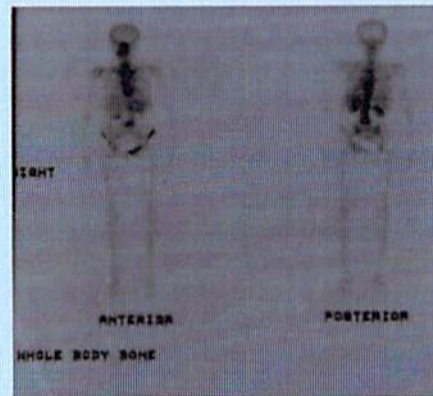


Figure 2 :Bone scan showed a high uptake at os vertebrae lumbal IV-V and spina ischiadica anterior superior and ramus superior ossis pubis sinistra.

2. A woman had the right hip joint complain. She referred to nuclear medicine division based on x-ray result, that said a metastases process on a destruction of caput os femur dextra. She underwent lobectomy five years before with adenomatous goiter histopathology. She had not have a proper follow-up. The bone scintigraphy showed high uptakes at caput os femur dextra, oxis ischii and acetabulum dextra (figure 3). The thyroglobulin serum was 89ng/mL and TSH was 0.571 uIU/mL.

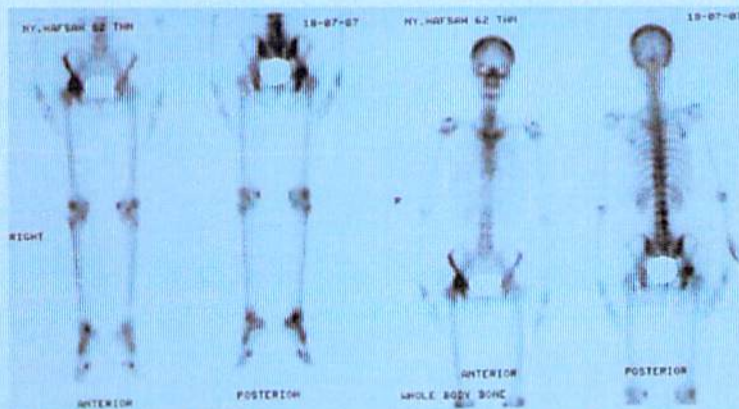


Figure 3: The bone scintigraphy showed high uptakes at caput os femur dextra, oxis ischii and acetabulum dextra.

DISCUSSION

Diagnosis of the thyroid neoplasms are subject to pathologist interpretation on specific architecture and cytologic features. Certain anatomic features may missed, where the point was a potential to be malignant. Morphologic only couldn't predict a biologic behavior. In general, benign tumors are well-differentiated and certain well-differentiated thyroid cancer may form normal-appearing follicles. Thus, morphologic diagnosis of a well-differentiated thyroid tumor may sometimes quite difficult. Around 58% of 700 cases of thyroid cancer which had five individual observers agreed on the diagnosis. Observer variations occurred in the number of cancer diagnosis and also in the classification of tumors in various histologic categories. It is not surprisingly, the observer disagreement is highest for follicular type, where the differentiation between benign and malignant can be difficult.

The aggressiveness of particular morphologic type of thyroid neoplasm remains unpredictable in the individual case. An appropriate follow-up protocol with benign thyroid morphologic is important for determining their likelihood of developing cancer and a follow up studies of each neoplasm can establish the level of risk. It should be reminded, did cancer arise from a non-malignant cell in the benign tumor or did the benign tumor contain from the outset, a silent or indolent malignant focus?

CONCLUSION

These cases highlights the follow-up should be completed, patients education is needed for duration follow-up compliance especially for patients with risk factor for thyroid cancer

REFERENCES:

1. Cotran, R., Kumar, V., Collins, T. (1999). Robbins Pathologic Basis of Disease, 6th Edition. W.B. Saunders.
2. Katoh, H., Yamashita, K., Enomoto, T., Watanabe, M. Classification and General Considerations of Thyroid Cancer. Annals of Clinical Pathology. 2015; 3(1): 1045
3. Baloch, Z.W., LiVolsi, V.A. Follicular-Patterned Lesions of the Thyroid The Bane of the Pathologist. Am J Clin Pathol 2002; 117: 143-150
4. Namba, H., Rubin, S., Fagin, J. Point mutations of Ras oncogenes are an early event in thyroid tumorigenesis. Molecul Endocrinol. 1990; 4: 1474.
5. Karga, H., Lee, J.-K., Vickery, A., Thor, A., Gaz, R., Jameson, J. Ras oncogene mutations in benign and malignant thyroid neoplasms. J Clin Endocrinol Metab. 1991; 73: 832.
6. Meyer, P.C. The Relationship between the Nodular Goiter and Carcinoma of the Thyroid. British Journal of Cancer. 1962; 16(1): 16-26.
7. Hazard, J., Hawk, W., Crile, G. J. Medullary (solid) carcinoma of the thyroid. A clinicopathologic entity. J Clin Endocrinol Metab. 1959; 19: 152.