CASE REPORT: A CASE OF ANAPLASTIC THYROID CARCINOMA AND REVIEW LITERATURE

Nguyen Van Phuc[1], Tran Ngoc Huy[1], Tran Nhat Huy[1], Le Kim Hong[1]

ABSTRACT

Background: *Differentiate thyroid carcinomas (DTCs), papillary and follicular cancers, are the most frequent forms, instead anaplastic thyroid carcinoma (ATC) is estimated to comprise 1–2% of thyroid malignancies. Clinically, anaplastic thyroid carcinoma is a highly aggressive and rapidly fatal. The diagnosis of ATC is difficult and requires numerous clinical, radiologic, and pathologic data.In Viet Nam,the role of complete surgical resection combine with radiotherapy and chemotherapy is still limited for ATC treatment.*

Objective: *1.To describe some clinical characteristics of ATC.*

2.To get some experiences in treatment of ATC.

Materials and methods: *A 70 years old female patient case report with ATC diagnosed was analyzed retrospectively in Oncology center-Hue central hospital. Clinical data,surgical notes,histologic pathology were obtained.*

Results: *Locally, ATC showed a rapidly enlarging anterior neck mass post-operative with respiratory failure was the most common clinical symptom.Patient died 2 months after last operation.*

Conclusions:*A 70 years old female patient is one of patients with ATC die from aggressive local regional disease, primarily from upper airway respiratory failure and pulmonary metastasis. An accurate diagnosis of ATC is difficult, as the disease is often misdiagnosed as sarcoma thyroid and requires the combined assessment of clinical,*

Immunohistochemistry data. Although rarely possible, complete surgical resection may gives the best chance of long-term control and improved survival if combine with chemotherapy and radiotherapy.

Keywords: *Anaplastic thyroid carcinoma(ATC),rare tumor of thyroid gland.Sarcoma of thyroid gland.*

I. BACKGROUND

Differentiate thyroid carcinomas (DTCs), papillary and follicular cancers, are the most frequent forms, instead anaplastic thyroid carcinoma (ATC) is estimated to comprise 1–2% of thyroid malignancies. ATC presents with a rapidly growing fixed and hard neck mass with local invasion and/or compression. Around 20–50% of patients present with distant metastases, most often pulmonary [6].The preoperative diagnosis of ATC is difficult and prognosis is poor. Therapy options include surgery, external beam radiation therapy, and investigational clinical trials, however it is still running and remain challenging.

II. MATERIALS AND METHODS

2.1.Material

We introduced a 70 years old female patient diagnosed with anaplastic thyroid carcinoma who was

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treated with surgery at Hue Oncology center.

2.2.Methods

Report a rarely case.

III. CASE REPORT

A 70 years old female patient was hospitalized in Hue central hospital on March 2018 with the big neck tumour . As far as she could remember, it had developed over about six months.

There was no previous history of thyroid gland disease and she was in good general health, with no significant personal or familial medical problems or medication. No symptoms of hypo or hyperthyroidism were present.

There was a relatively hard neck mass measuring 7*7*6cm with occupied whole left lobe of thyroidgland . Mass was slightly displacing the larynx and trachea to the right side and palpabled. Ultrasonography showed an 5.5x6.0 cm hypoechoic thyroid mass without dense central calcification on the left and there was no lymph neck. CT scan showed 6.2x5.5x 6.6 cm mass lesion with limited border and there was no area suggestive of malignant growth thyroid gland.There was no abnormal significant on chest X-ray. Fine needle aspiration cytology (FNAC) was reported as a colloid goiter of thyroid. Left lobectomy with find out nodule in opposite was performed. Grossly tumor was replacing whole of left lobe with 6.6*6.0*6.5 cm in size.

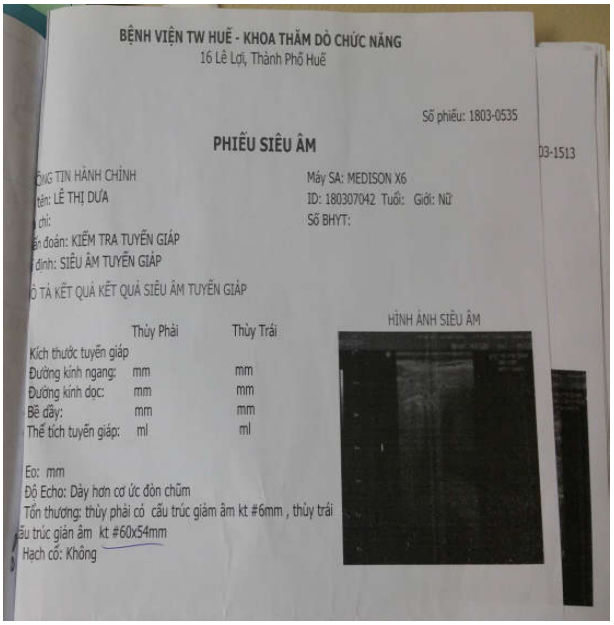
The pathological result post-operative was sarcoma of thyroid gland.There fore,we decided to launch a total thyroidectomy procedure with this patient in the time of waiting for the immunohistochemistry result. Intra 2nd operative,the residual of thyroid gland was resected and a small necrotic fragment adhesive to fibrous tissue was observed but the immediate frozen section result was inflammation combined necrotic tissue.The immunohistochemistry result showed CK1/3(+),Vimentin(+),Thyroglobulin,TTF1,SMA(-),Ki67(+10%).Then she was diagnosed with ATC stage IV.

The whole body CT-64 was indicated to evaluate local post-operative and distant metastases and it showed a nodule in pulmonary parenchyma conclusive of metastases. The patient was discharged from hospital 2weeks and recommended return to Hue oncology center 2weeks later for following chemotherapy.

Recurrent of the disease

Undesirely,the patient could not be given any adjuvant therapy as the post- operative course was not good.She came back with the severity inflammatory syndrome and there was a mass wide spread ,swelling, haemorrhagic on the neck, compressed the trachea and esophageus so she had voice change, shortness of breath and unability to swallow .At the ICU,she underwent tracheotomy after the 3rd operative with objective palliative surgery.She unfortunately died of severe respiratory distress following pulmonary metastasis.

Results	1St post-operative	2Nd post-operative	3Rd post-operative	**Normal range**
WBC	7.57	12.6	**38.8**	(4-10)K/µL
TSH	0.35	0.31	4.52	(0.27-4.2) µIU/mL
FT4	11.9	13.2	14.5	(12-22) Pmol/L


BỆNH VIỆN TW HUẾ - KHOA THĂM DÒ CHỨC NĂNG
16 Lê Lợi, Thành Phố Huế

Số phiếu: 1803-0535

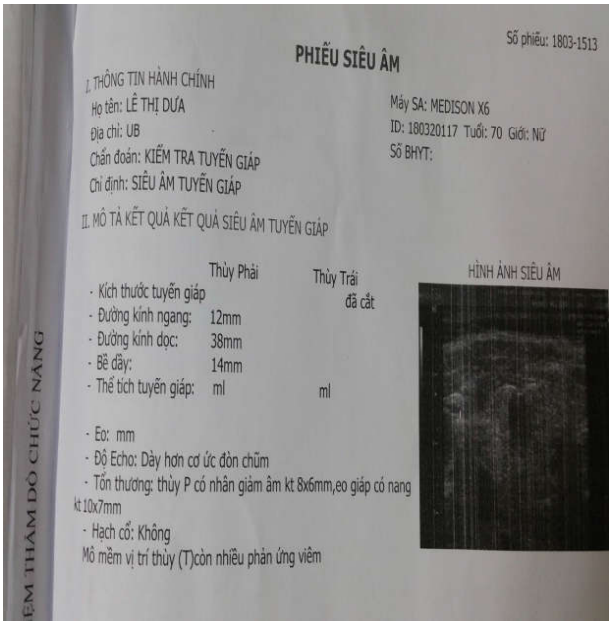
PHIẾU SIÊU ÂM

Máy SA: MEDISON X6
ID: 180307042 Tuổi: Giới: Nữ
Số BHYT:

Thùy Phải Thùy Trái
Kích thước tuyến giáp
Đường kính ngang: mm mm
Đường kính dọc: mm mm
Bề dầy: mm mm
Thể tích tuyến giáp: ml ml

Eo: mm
Độ Echo: Dày hơn cơ ức đòn chũm
Tổn thương: thùy phải có cấu trúc giảm âm kt #6mm , thùy trái
cấu trúc giản âm kt #60x54mm
Hạch cổ: Không

HÌNH ẢNH SIÊU ÂM


Số phiếu: 1803-1513

PHIẾU SIÊU ÂM

I. THÔNG TIN HÀNH CHÍNH
Họ tên: LÊ THỊ DỪA
Địa chỉ: UB
Chẩn đoán: KIỂM TRA TUYẾN GIÁP
Chỉ định: SIÊU ÂM TUYẾN GIÁP

Máy SA: MEDISON X6
ID: 180320117 Tuổi: 70 Giới: Nữ
Số BHYT:

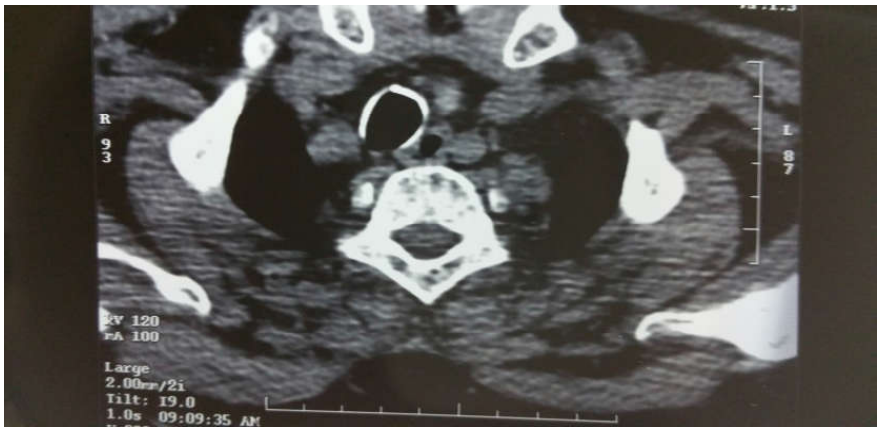
II. MÔ TẢ KẾT QUẢ KẾT QUẢ SIÊU ÂM TUYẾN GIÁP

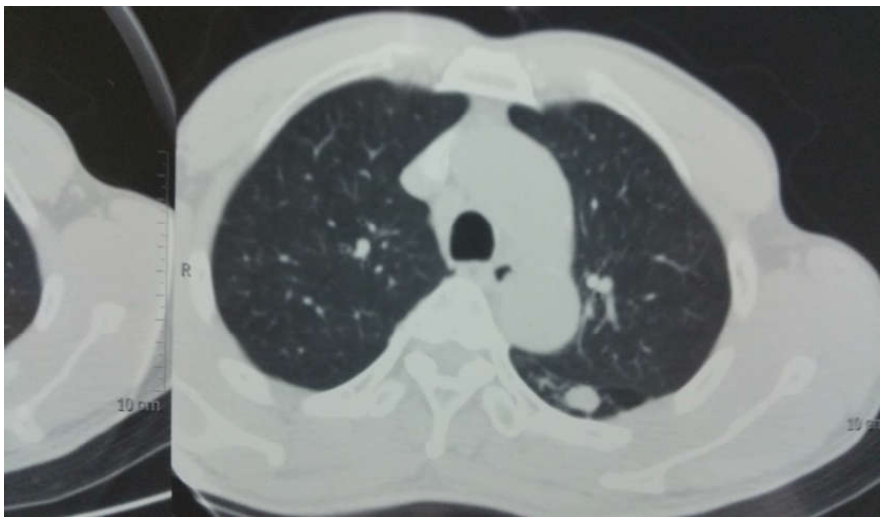
Thùy Phải Thùy Trái
- Kích thước tuyến giáp đã cắt
- Đường kính ngang: 12mm
- Đường kính dọc: 38mm
- Bề dầy: 14mm
- Thể tích tuyến giáp: ml ml

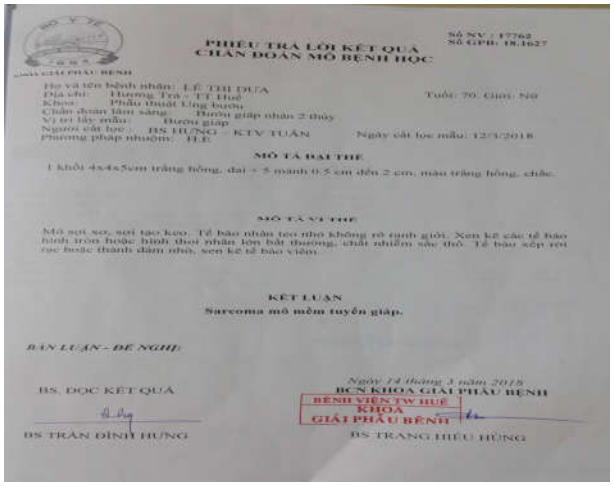
- Eo: mm
- Độ Echo: Dày hơn cơ ức đòn chũm
- Tổn thương: thùy P có nhân giảm âm kt 8x6mm,eo giáp có nang kt 10x7mm
- Hạch cổ: Không
Mô mềm vị trí thùy (T)còn nhiều phản ứng viêm

HÌNH ẢNH SIÊU ÂM

PRE-OPERATIVE **ULTRASONOGRAPHY** POST-1ST OPERATIVE






PHIẾU TRẢ LỜI KẾT QUẢ
CHẨN ĐOÁN MÔ BỆNH HỌC

MÔ TẢ ĐẠI THỂ

MÔ TẢ VI THỂ

KẾT LUẬN
Sarcoma mô mềm tuyến giáp.

BÀN LUẬN - ĐỀ NGHỊ:

BS. ĐỌC KẾT QUẢ
BS TRẦN ĐÌNH HÙNG

BỆNH VIỆN TW HUẾ
KHOA GIẢI PHẪU BỆNH
BS TRẦN HIẾU HÙNG

PATHOLOGICAL RESULT SARCOMA


PHIẾU TRẢ LỜI KẾT QUẢ
HÓA MÔ MIỄN DỊCH

I. HÌNH ẢNH VI THỂ

KẾT QUẢ (Nhuộm IHMD 05 maker)

II. CHẨN ĐOÁN
Cac-ci-noma tuyến giáp thể không biệt hóa.
Undifferentiated (anaplastic) carcinoma

BS. ĐỌC KẾT QUẢ
BSCKII. Đoàn Phước Thi

BỆNH VIỆN TW HUẾ
KHOA GIẢI PHẪU BỆNH

IMMUNOHISTOCHEMISTRY RESULT ATC

IV. DISCUSSION

4.1.Stage: Patients with ATC even in the absence of metastatic disease are considered to have systemic disease at the time of diagnosis. All ATCs are considered stage IV by the International Union Against Cancer (UICC) – TNM staging and American Joint Commission on Cancer (AJCC) system.

4.2. Pathology and immunohistochemistry

Aanaplastic thyroid carcinoma may be very similar to sarcoma that differential diagnosis is very difficult. The diagnosis of sarcoma should only be done on tumors where no signs of epithelial differenciation is found,when an epithelial differentiation may be found in ATC.Therefore,the role of immunohistochemistry is very important with differentiated diagnose of both rare tumour types.

Differential diagnosis of ATC

	LMS	**MFH**	**AC-T**	**MCT (Spindle cell variant)**	**Metastasic MFH /LMS**
Incidence	0.014%	RARE	~5%	RARE	RARE
Origin	Smooth muscles of capsular blood vessels	Uncertain origin Probably fascia surrounding thyroid	Undifferentiated	Para follicular C-cells	? multipotent fibroblast
Age/sex	>55, F>M	>65, F>M	>60, F>M	40-60, F>M	>50, F>M
Morphology	Pleomorphic spindle cells in sheets & whorls, necrosis & mitosis	Plump spindle cells in storiform pattern, Tumor giant cells	Varied	Spindle out cells	Varied
IHC	SMA+, Vimentin +	CD 68+, Vimentin+	CK+ TG – SMA-, CD 68-	Calcitonin + TG-	Vimentin+ CD68/ SMA+ TG-
Prognosis	Poor	Poor	Dismal	Better	Poor

4.3.Surgery:

The aim of surgery is to obtain a complete macroscopic resection, with microscopically clear resection margins. Complete resection has been identified as a prognostic factor in several clinical trials[7]. When feasible, surgery must aim at a radical intent. Partial resection of the tumor followed by radiotherapy and chemotherapy may delay or avoid airway obstruction, although it can improve survival only by a few months [8].So,two procedures we did that totalthyrodectomy(2^{nd}) and surgery palliative (3^{rd}) are also recognized in work Junor and Nel.C. It is theoretically possible that, in selected patients, even in the setting of metastatic disease, surgery may result in an improved quality of life and prevent death from suffocation[9].

4.4. Review the role of radiotherapy and chemotherapy in literature

Radiation does not alter the course of ATC in most patients. On the other hand, when combined with surgery and chemotherapy, it can prolong the short-term survival in select and subset of patients. Intensity-modulated radiation therapy (IMRT) based on computerized treatment planning and delivery is able to generate a dose distribution that delivers radiation accurately with sparing of the surrounding normal tissue [10]. Higher doses of radiation can be given over a shorter time with less toxicity by employing hyperfractionation techniques [11].

More encouraging are the results reported by the concurrent use of taxanes and radiation. After standard dose of 60Gy in 30 fractions along with docetaxel 100 mg every 3 weeks for six cycles, an improvement of disease with partial remission (33%) and complete response (64%) was observed in ATC patient[12].

V. CONCLUSION

Clinically, anaplastic thyroid carcinoma is a highly aggressive and rapidly fatal**.**ATC is a rare tumour that need to be differentiated from metastatic sarcomas, spindle cell variant of medullary carcinoma, synovial sarcoma, fibrosarcoma; final diagnosis rests on histopathology and immunohistochemistry. Surgery is the mainstay of treatment while effect of combination with radiotherapy and chemotherapy needs to be observed in larger number of patients for improving patient survival.

By this report,we would like to receive more and more experiences from experts in setting the primary planning of diagnosis and treatment this rarely cancer.

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