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Clinical Image

Clinical challenge: rapidly enlarging neck mass

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A 68-year-old female patient was admitted to the emergency department complaining of breathing difficulty. Her anamnesis in the past two months disclosed a neck mass, weight loss and weakness. She revealed that over the last 15 days the mass had grown quickly. Medical history included 10 years of uneven drug use for hypertension. She was intubated and needed respiratory support. Thyroid function tests, anti-thyroid antibodies and other biochemical parameters were within the normal ranges. Ultrasonographic examination of the neck showed various hypoechoic nodules and cystic degenerative fields with an enlarged thyroid gland. A lesion was noted, filling the right thyroid lobe and isthmus almost entirely, causing thyroid contour lobulations including uneven and heterogeneous settings, microcalcifications and secondary nodules. Contrast-enhanced computed tomography (CT) demonstrated a heterogeneously enhancing solid tumor involving the right thyroid lobe and isthmus with extension to the tracheoesophageal groove. Also, in the CT scans, tracheal deviation and upper mediastinal shift involving the central or lateral lymph nodes can be seen (Figure 1).

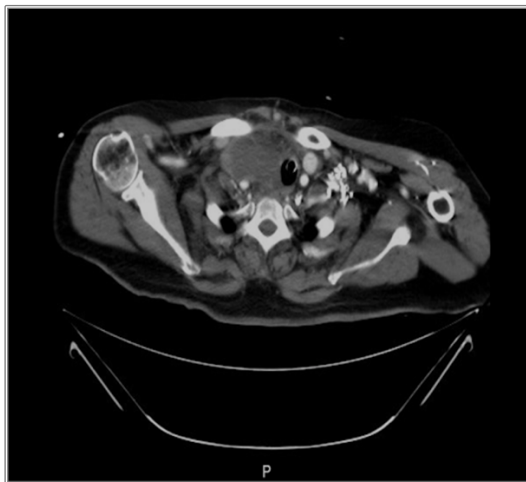


Figure 1a. Axial neck CT.



Figure 1b. Coronal neck CT.

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Fine-needle aspiration biopsy of the thyroid nodules was conducted and anaplastic thyroid carcinoma (ATC) was specified from biopsy outcomes. Either an ATC or a primitive thyroid gland lymphoma can cause a quickly increasing neoplastic mass of the neck. These two malignancies share the same clinical characteristics, but their therapy and outcome differ extensively. The prognosis of thyroid lymphoma is much better than that of ATC. Only histological criteria can provide a definite diagnosis through biopsy [1,2]. The fine-needle aspiration often produces enough cytological data to allow diagnosis, however, if the fine-needle aspiration does not yield definitive outcomes, the patient may need an open surgical biopsy. Blood or urine laboratory tests cannot definitely diagnose ATC. Serum calcium concentrations should be tested to exclude carcinoma of the medullary thyroid or parathyroid neoplasms. Imaging studies are used to evaluate local spread and metastasis. It is possible to use cervical CT scanning to identify local disease spread. It is also feasible to detect metastases to mediastinum, liver, lung, bone and brain through CT scanning, magnetic resonance imaging (MRI) or 18F-fluorodeoxyglucose-positron emission tomography (18F-FDG PET) [3,4]. The differential diagnosis of ATC also involves well-differentiated or poorly differentiated thyroid cancer, goiter and solid tumor metastasis to the thyroid.

Anaplastic thyroid carcinoma is an aggressive malignancy that carries all thyroid carcinomas with the poorest prognosis. The disease is more prevalent in older patients with predominance in women. Airway obstruction is ascribed to death from ATC in 50% of cases. Tracheal stenting or tracheostomy may palliate airway obstruction. Treatment of ATC continues to be palliative and the additional proof is needed concerning the effectiveness of radiotherapy and chemotherapy [1-3].

Conflict of interest

The authors declare no conflict of interest.

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