Case report:

Extensive Neck Haematoma as an Extremely Rare Presentation of Thyroid Carcinoma: A Case Report

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Abstract:

Anaplastic thyroid carcinoma (ATC) is uncommon but deadly. It is typically presented with fast growing neck mass, hoarseness or dysphagia. We report an extremely rare presentation of ATC in an elderly lady, with expanding ecchymosis involving laryngopharynx, neck and upper chest region, which causing upper airway obstruction. The rarity of presentation and the management dilemma were discussed.

Keywords: Anaplastic thyroid carcinoma; hematoma; neck

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Introduction

Anaplastic thyroid carcinoma (ATC) forms less than 2% of all thyroid cancers which causes 14-39% of its death.[1] Common ATC presentations are fast-growing neck mass (77%), dysphagia (40%), voice change (40%), stridor (24%) or neck pain (26%).[2] It is known for being rapidly expanding and extremely aggressive. Till date, this uniformly lethal disease remains a great challenge for both surgeons and physicians as definitive treatment is yet to be found.

Case Report

A 69-year-old lady, with underlying diabetes mellitus and hypertension presented with one-week history of anterior neck ecchymosis. It progressed rapidly into an extensive neck hematoma, causing breathing difficulty and odynophagia. She had no history of neck trauma or bleeding tendencies. She was also not taking any traditional medication or anticoagulant.

Examination showed a stridorous lady with extensive neck hematoma, extending from hyoid level to upper chest (Figure 1). No obvious thyroid mass was visible or palpable. Flexible nasopharyngolaryngoscopy demonstrated haematoma of laryngopharynx involving left vocal fold, vallecula and lateral pharyngeal wall. Urgent neck computed tomography (CT) scan reported as heterogeneous thickening of left neck soft tissue with local extension possible of hematoma with left lower pole thyroid calcified lesion (Figure 2a).

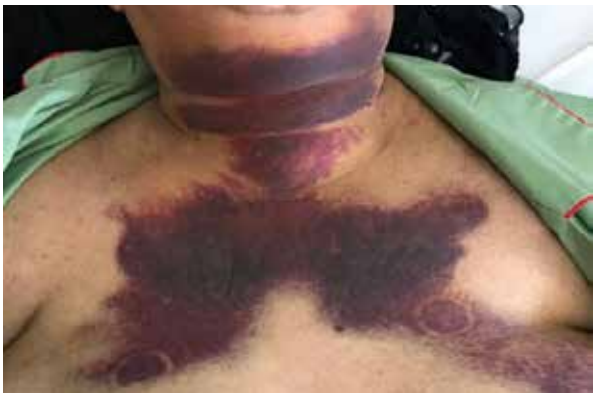

Figure 1: Extensive ecchymosis seen extending from hyoid level to upper chest.

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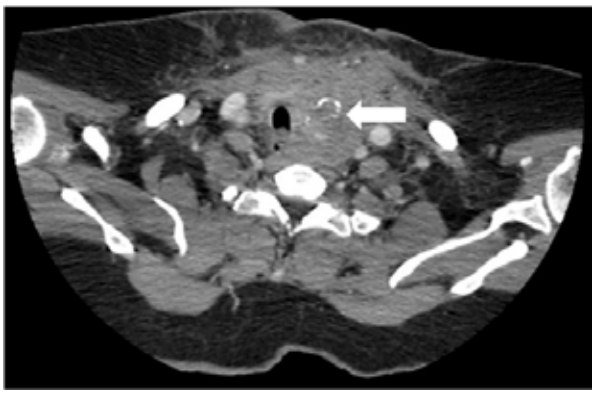

Figure 2a: CT neck axial view showing irregular hypodense calcified ruptured left thyroid lobe lesion with hematoma suggestive of malignancy.

A CT angiogram was requested to identify the source of bleeding. Ruptured left thyroid mass with left cervical-retrosternal haematoma were demonstrated. There were multiple lung nodules seen, possible of lung metastasis. Active vascular bleeding source was not identified (Figure 2b).

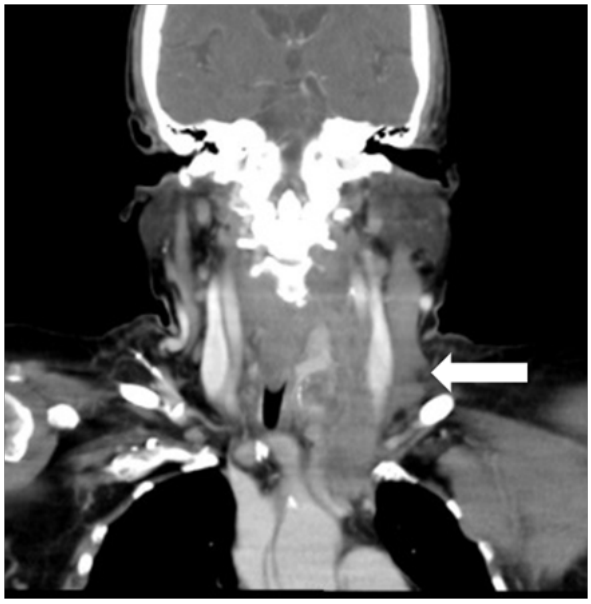

Figure 2b: CT neck coronal view showing displacement of the left internal jugular vein and common carotid artery laterally by haematoma.

The usual recommended fine needle aspiration cytology (FNAC) or core biopsy was not a favourable method for histology sampling, because of the possibility of sampling failure or further worsening the thyroid bleeds despite normal coagulation profile.

During diagnostic workup, the haematoma enlarged, and stridor worsened, hence endotracheal intubation was lifesaving. While in operation theatre, emergency evacuation of the neck haematoma was carried out. Bleeding from thyroid tumour was noted, with evidence of tracheal invasion. There was no plane of demarcation with both the internal jugular vein and common carotid artery. Haemostasis achieved by using diathermy without ligation of vessels as no obvious source active bleeding seen. Frozen section sample sent was concluded as ATC (Figure 3, 4). Further surgery was not commenced. A tracheostomy tube was placed inferior to tracheal invasion site to ease breathing while the patient in ward. The patient however succumbed to her illness one week later.

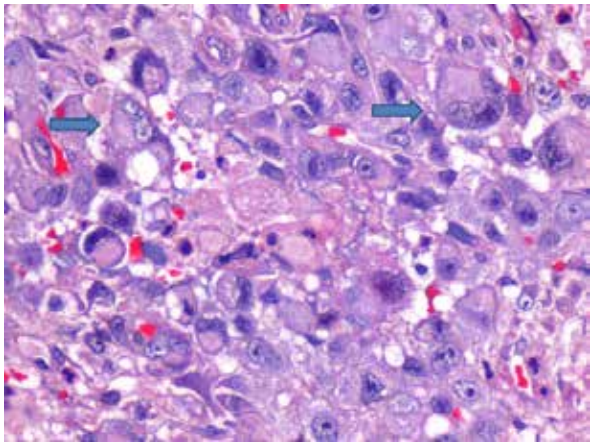

Figure 3: The tumor cells are singly distributed with markedly pleomorphic nuclei, large with bizarre looking nuclei, hyperchromatic to vesicular nuclei with prominent nucleoli. Multinucleated giant tumor cells are also seen (arrow). (H&E x 400)

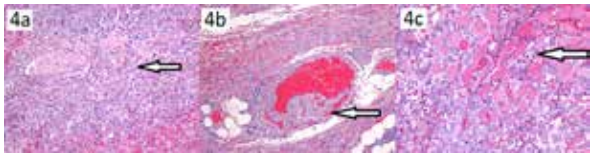

Figure 4: Tumour cells infiltrating perineural(4a), vascular (4b), and skeletal muscle (4c) (H&E X 100)

Discussion

American Joint Committee on Cancer (AJCC) 2017 classifies thyroid malignancies from Stage I to Stage IV. ATC automatically becomes stage IV. It is further sub-classifiedinto stage IVA (intrathyroidal disease), stage IVB (gross extrathyroidal extension or cervical lymph node metastasis), and stage IVC (distant metastasis). Its median survival time is only 5 months and1year survival rate is 20%.[3] Patient was staged IVC ATC due to the presence of lung metastasis.

Diagnosing our patient was challenging as she presented initially with a neck haematoma. Common causes of neck hematoma include trauma, ruptured aneurysm, post straining or

deranged coagulopathy state.[4] It is extremely rare that an ATC presents early with neck bruises and hematoma. Patient's initial blood investigations including full blood count, coagulation profile and thyroid function test were all normal. As we had some clue from the CT scan possible of bleeding thyroid tumour, microscopic examination of the thyroid mass is essential for diagnosis and management planning.

American Thyroid Association (ATA) recommends preoperative FNAC or core biopsy. It was not an option here as the patient was having active bleeding and progressive airway obstruction, evidence by worsening of ecchymosis and respiratory distress with stridor. Frozen section was decided, as urgent surgery with haemostatic intention and intubation for securing the airway was planned. Intubation remains challenging, as there was compromised airway with possible of uncontrolled tumour bleeding during the procedure. Tracheostomy consent was taken as a standby in case of failed intubation.

Intraoperatively, ATC was confirmed. Complete excision of the mass was not possible as tumour had eroded extensively the adjacent structures. Tumour debulking was risky as the tumour was highly vascular and adjacent to major vessels. Tracheostomy is usually not recommended for every ATC patient as it does not improve quality of life or prolong survival. It was done in view of possible future airway compromised by the tumour that has eroded the trachea.[5]

As definitive treatment for ATC is yet to be established, treatment strategies should be always base on a multidisciplinary team which includes surgeon, oncologist, and endocrinologist. ATA recommends to define the treatment goal of ATC in the beginning, into either therapeutic or palliative intention. Surgical resection should be done if a negative margin can be achieved. This is followed by definitive radiotherapy or chemotherapy if the patient is having good performance status and no evidence of metastasis.[5] Metastatic ATC however has a poor prognosis and short survival. No definitive treatment has yet to show promising outcome.[5]

Conclusion

Anaplastic thyroid cancer is lethal and carries a dismal prognosis. Due to its aggressive nature, cancer staging, disease burden assessment and outlining treatment options including tumour resection and/or chemoradiotherapy must be done early by a multidisciplinary team for the best interest of the patient.

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Ethical Approval Issue

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Authors Contributions:

Conception and design: LRH, FMI, IM;

Collection and assembly of data: LRH, FMI, KA, NA, FH, IM;

Critical revision of the article for important intellectual content: LRH, FMI, KA, IM.

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