Thyroid angiosarcoma: A case report and review of literature

Abstract

Thyroid angiosarcoma is an exceptionally rare and highly aggressive vascular malignancy with a poor prognosis due to its rapid local progression and early metastatic spread. We report the case of a 68-year-old Moroccan woman presenting with a rapidly enlarging cervical mass associated with compressive symptoms. Imaging revealed a large bilateral thyroid tumor, and total thyroidectomy was performed. Histopathological examination confirmed primary thyroid angiosarcoma, supported by strong endothelial immunohistochemical expression of ERG, CD31, and CD34. Although surgical resection was achieved, margins were close (<1 mm). Adjuvant radiotherapy was administered; however, early pulmonary metastases occurred, and the patient died shortly after treatment completion. This case illustrates the aggressive clinical course of thyroid angiosarcoma despite multimodal management and underscores the diagnostic value of immunohistochemistry as well as the persistent therapeutic challenges associated with this rare entity.

Introduction:

Thyroid angiosarcoma is an extremely rare malignancy, accounting for less than 1% of primary thyroid cancers worldwide. It is reported more frequently in Alpine regions, possibly in association with iodine deficiency and endemic goiter (1,2). This highly aggressive tumor is characterized by rapid local invasion and early distant metastasis, leading to poor prognosis and short survival despite treatment (3).

Case presentation:

We report the case of a 68-year-old Moroccan woman presenting with a rapidly enlarging anterior cervical mass associated with dysphonia and dyspnea. Cervical computed tomography revealed a large tumor involving both thyroid lobes.

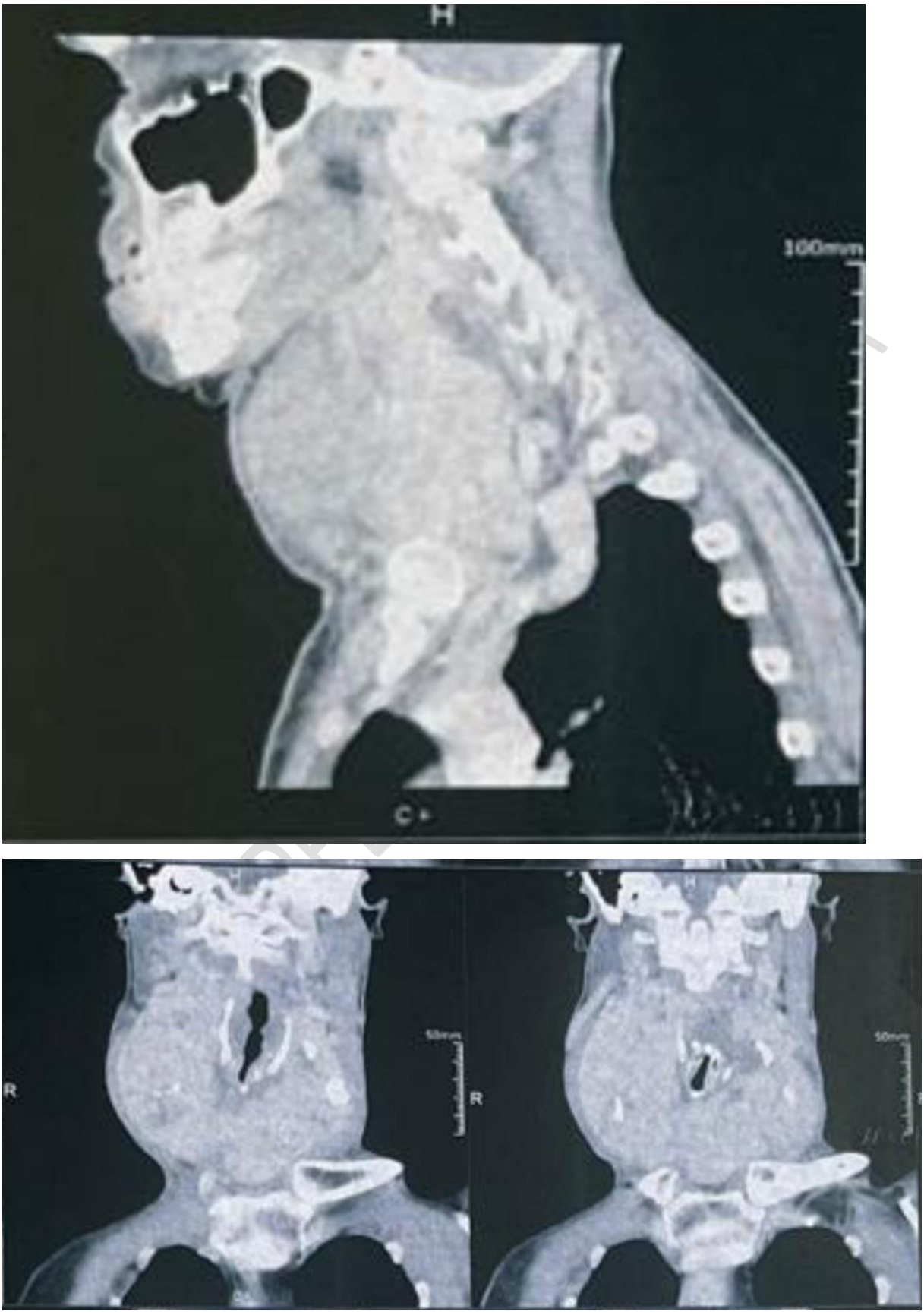

Figure1:sagittal and transverse section of the cervical CT scan

The patient underwent total thyroidectomy. Histopathological examination demonstrated malignant vascular proliferation, and the diagnosis of thyroid angiosarcoma was confirmed by strong immunohistochemical expression of endothelial markers including ERG, CD31, and CD34 (4). Surgical margins were close (<1 mm).

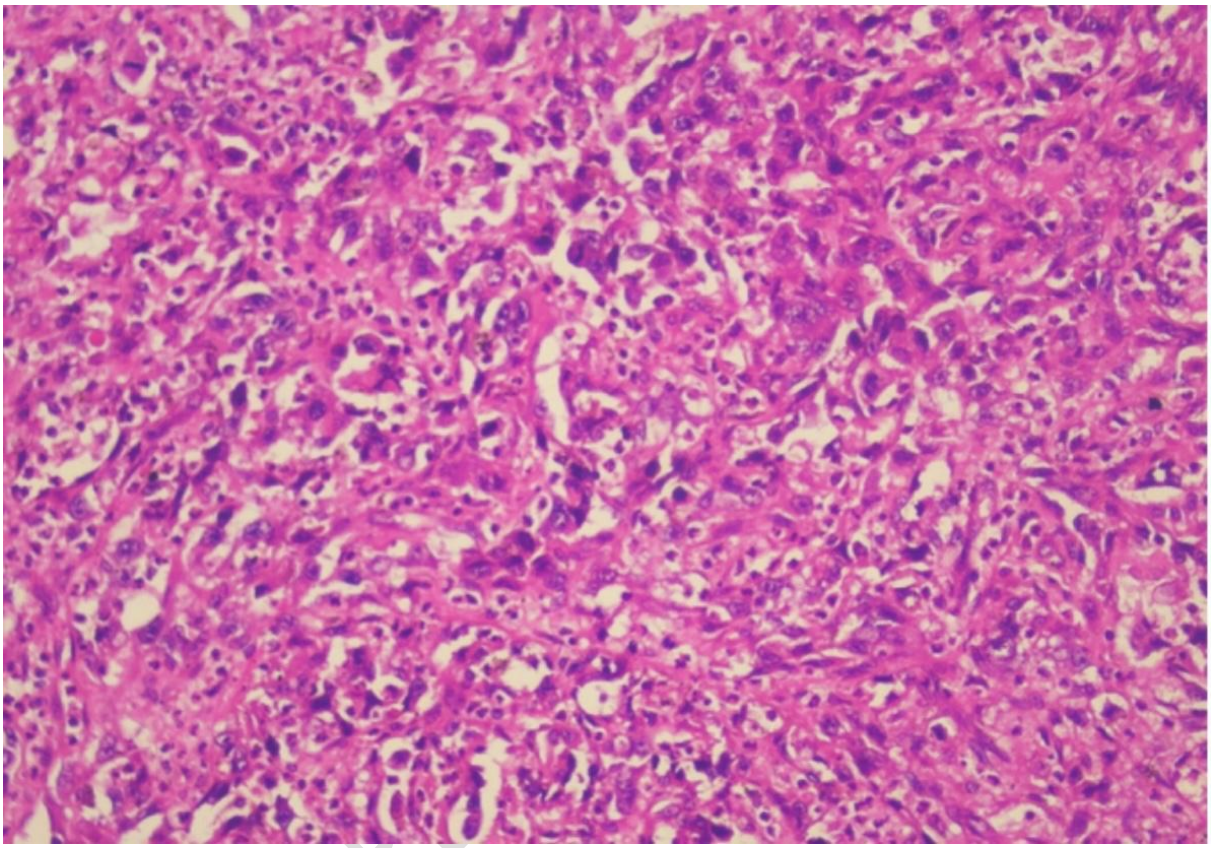

Figure2: histological image of the thyroid tumor

Adjuvant radiotherapy was administered; however, early pulmonary metastases developed, and the patient died one month after completion of treatment (3).

Discussion:

Primary thyroid angiosarcoma is a rare and highly aggressive mesenchymal tumor that may mimic anaplastic thyroid carcinoma clinically and radiologically (2). Accurate diagnosis relies on immunohistochemical staining for endothelial markers such as CD31, CD34, and ERG, confirming vascular differentiation (4). Despite radical surgery and adjuvant radiotherapy, prognosis remains poor due to early metastatic dissemination (3,5).

Conclusion:

Thyroid angiosarcoma remains an exceptionally rare and aggressive malignancy with limited survival outcomes. Early diagnosis and multidisciplinary management are crucial, although current therapeutic strategies often fail to prevent early distant spread (3,5).

References

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