PDF issue: 2025-12-05

Anaplastic Thyroid Carcinoma With Air Spaces

Suzuki, Masaki Bando, Hironori

(Citation)

JCEM Case Reports, 2(1): Luad165

(Issue Date)

2024-01

(Resource Type)

journal article

(Version)

Version of Record

(Rights)

© The Author(s) 2024. Published by Oxford University Press on behalf of the Endocrine Society.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs licence, which permits non-commercial reproductio... (URL)

https://hdl.handle.net/20.500.14094/0100486214







Anaplastic Thyroid Carcinoma With Air Spaces

Masaki Suzuki¹ and Hironori Bando^{1,2}

¹Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Graduate School of Medicine, Kobe 650-0017, Japan

²Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Hospital, Kobe 650-0017, Japan

Correspondence: Hironori Bando, MD, PhD, Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Hospital, 7-5-1, Kusunoki, Chuo, Kobe 650-0017, Japan. Email: hbando@med.kobe-u.ac.jp.

Key Words: anaplastic thyroid carcinoma, thyroidal air space

Abbreviations: ATC, anaplastic thyroid cancer; CT, computed tomography.

Image Legend

A 75-year-old man presented to the orthopedic surgery department with a complaint of neck pain for 1 month and was diagnosed with multiple bone tumors of the cervical spine. Preoperative blood tests showed primary hypothyroidism (thyroid stimulating hormone; 36.8 µIU/mL [36.8 mIU/L] [0.610-4.230 mIU/L], free thyroxine; 0.42 ng/dL [5.40 pmol/L] [11.58-21.87 pmol/L]), and the patient was referred to our department. A hard mass was palpated within the anterior neck region. Cervical contrast-enhanced computed tomography (CT) showed an enlarged thyroid with air spaces (Fig. 1A and 1B). Thyroid ultrasonography revealed an irregular poor-defined hypoechoic lesion with unclear borders and air spaces (Fig. 1C). Fine needle aspiration cytology was performed, and the patient was diagnosed with anaplastic thyroid carcinoma (ATC). Subsequent histopathological examination revealed that the cervical tumors were ATC metastasis. The patient had no respiratory symptoms. He was provided with palliative care because of poor general condition. ATC is an aggressive undifferentiated neoplasm with a mortality approaching 100% [1]. Appropriate examination and diagnosis are urgently required. CT images of ATC masses often show necrosis (82%) and visceral space invasion, involving the trachea (57%) [2]. Thyroidal air spaces are thought to be due to necrosis of the carcinoma and tumor invading the trachea.

Funding

No public or commercial funding.

Disclosures

None declared.

Informed Patient Consent for Publication

Signed informed consent obtained directly from the patient.

References

- Haddad RI, Bischoff L, Ball D, et al. Thyroid carcinoma, version 2.2022, NCCN clinical practice guidelines in oncology. J Natl Compr Canc Netw. 2022;20(8):925-951.
- 2. Ahmed S, Ghazarian MP, Cabanillas ME, et al. Imaging of anaplastic thyroid carcinoma. AJNR Am J Neuroradiol. 2018;39(3):547-551.





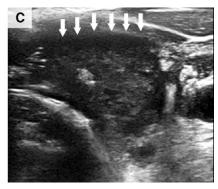


Figure 1. Thyroidal air spaces observed on cervical contrast-enhanced computed tomography and thyroid ultrasonography.