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CLINICAL IMAGE

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Multiple endotracheal metastases of combined small cell lung carcinoma

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Key message
We report a very rare case of combined small cell lung carcinoma (C-SCLC) which presented as persistent cough and was due to endotracheal metastases. Clinicians should be aware of this unusual site of metastases from a C-SCLC.

KEYWORDS
combined small cell lung carcinoma, endotracheal metastases, lung cancer

CLINICAL IMAGE

A 72-year-old man was admitted to our hospital because of a 5-month history of persistent cough. He was an ex-smoker with a history of 30 pack-years and had undergone right upper lobectomy for primary lung cancer 2 years before, which was diagnosed as combined small cell lung carcinoma (C-SCLC) comprising a component of SCLC admixed with adenocarcinoma and squamous cell carcinoma (pT2aN0M0, stage IB) (Figure 1). At that time, he refused chemotherapy. Coronal section of chest high-resolution computed tomography revealed multiple endotracheal nodules (Figure 2A). Upon bronchoscopic examination, endoluminal polypoid lesions were found (Figure 2B). A transbronchial biopsy of the polypoid lesions was performed. Histopathological examination showed SCLC (Figure 3). He responded to radiation and chemotherapy with carboplatin and etoposide. As a result, the polypoid lesions decreased in size and his cough improved significantly (Figure 2C,D). C-SCLC is defined as SCLC combined with any elements of non-SCLC. Endotracheal metastases of lung cancer are extremely rare.[1] Testori et al. reported a case of C-SCLC which presented as an isolated polypoid pedunculated endotracheal lesion with a complaint of cough and wheezing.[2] Clinicians should be aware of this unusual site of metastases for C-SCLC. Recognition and treatment improve the clinical condition.

AUTHOR CONTRIBUTION

Keishi Sugino was responsible for conceptualization and drafting the manuscript. Keishi Sugino, Hirotaka Ono, Masahiro Ando, Miho Kobayashi and Seiji Igarashi analysed and interpreted the clinical and pathological data. All authors read and approved the final manuscript.

CONFLICT OF INTEREST

None declared.

DATA AVAILABILITY STATEMENT

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

ETHICS STATEMENT

The authors declare that appropriate written informed consent was obtained for the publication of this manuscript and accompanying images.

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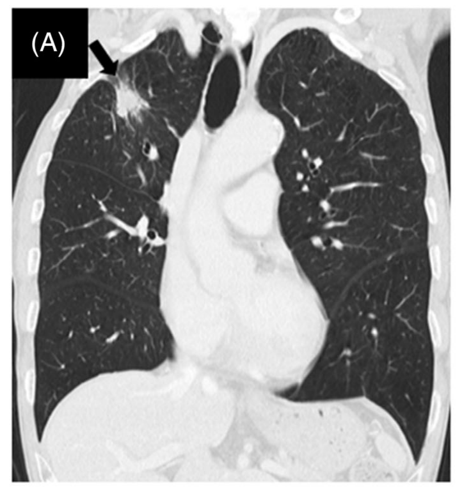

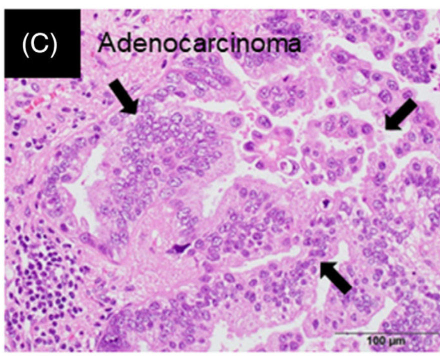

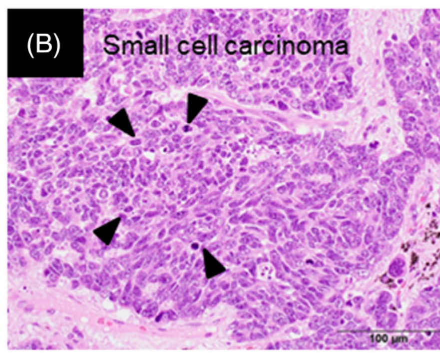

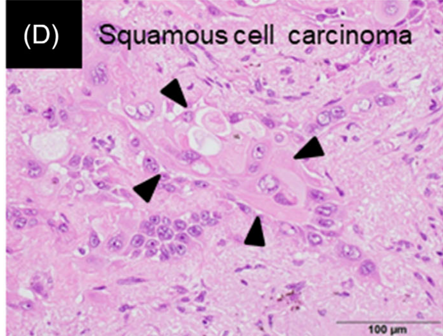

FIGURE 1 (A) Coronal section of chest high-resolution computed tomography at the initial visit shows a nodule with spiculation and pleural indentation measuring 23 mm in diameter in the right upper lobe (arrow), as well as emphysema in the bilateral upper lobes' predominance. Histological findings of the surgical lung resection specimens show three different components. (B) Small cell carcinoma with small-sized nuclei and scanty cytoplasm (arrow heads) (haematoxylin–eosin stain) (scale bar = 100 µm). (C) Papillary adenocarcinoma (arrows) (haematoxylin–eosin stain) (scale bar = 100 µm). (D) Keratinizing squamous cell carcinoma (arrow heads) (haematoxylin–eosin stain) (scale bar = 100 µm)

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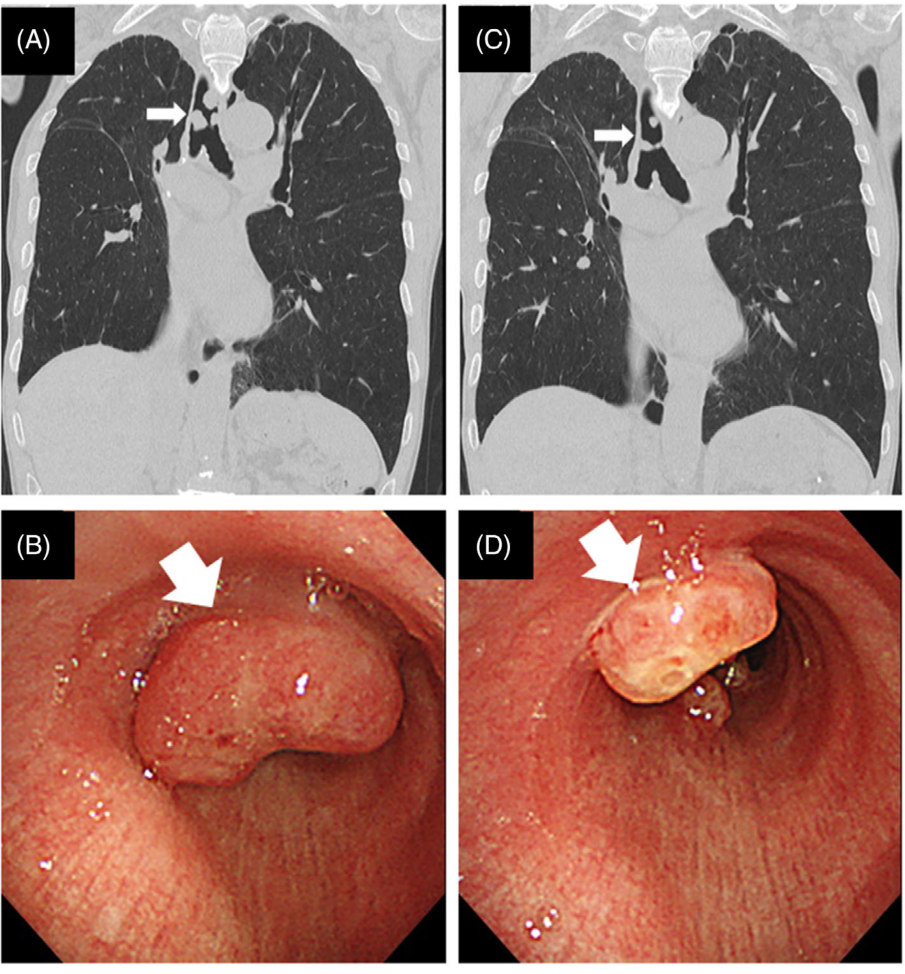

FIGURE 2 Serial changes in high-resolution computed tomography (HRCT) of the chest and bronchoscopy. (A) Coronal section of chest HRCT reveals multiple endotracheal nodules before the treatments (arrow). (B) Endoluminal pedunculated polypoid lesions measuring 20 × 15 × 8 mm in size are found in the trachea before the treatments (arrow). (C) One month after chemotherapy and radiation, multiple endotracheal nodules are reduced markedly from its original size on coronal section of chest HRCT (arrow). (D) Bronchoscopy 1 month after chemotherapy and radiation; protruding, glossy and polypoid lesions in the trachea are decreased in size (arrow)

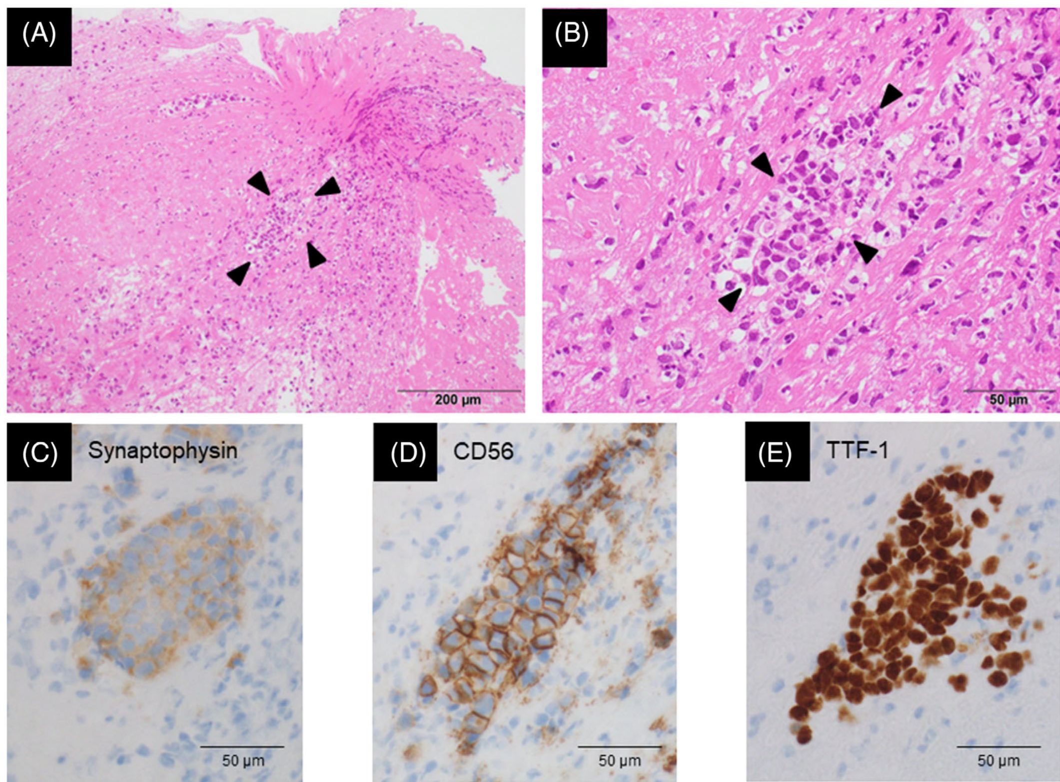

FIGURE 3 Histological and immunohistochemical examinations of the transbronchial lung biopsy. (A) Low magnified microscopic appearance shows a small cell lung carcinoma (SCLC) component with marked necrosis (arrow heads) (haematoxylin–eosin stain) (scale bar = 200 μm). (B) High magnified microscopic appearance of the area indicated by arrow heads in (A) shows small round cells with high nuclear-to-cytoplasmic ratio (arrow heads) (haematoxylin–eosin stain) (scale bar = 50 μm). (C) Synaptophysin expression in SCLC (scale bar = 50 μm). (D) CD56 expression in SCLC (scale bar = 50 μ m). (E) Thyroid transcription factor-1 (TTF-1) expression in SCLC (scale bar = 50 μm)