

IMAGING IN THORACIC CANCER

Metastatic adenoid cystic carcinoma of external auditory canal presenting as solitary pulmonary nodule

Yuhui Liu¹, Jujie Sun², Yong Huang¹, Liheng Liu¹, Liang Xu¹, Wenwu Li¹ & Zhaoqiu Chen¹

¹ Department of Radiology, Shandong Cancer Hospital and Institute, Shandong Academy of Medical Sciences, Jinan, China

² Department of Pathology, Shandong Cancer Hospital and Institute, Shandong Academy of Medical Sciences, Jinan, China

A 60-year-old woman presented with a solitary pulmonary nodule (SPN) in the inferior lobe of the right lung during a regular chest X-ray examination. Computed tomography (CT) (Fig 1A–D) and positron emission tomography (PET)-CT (Fig. 2A–D) demonstrated an irregular high-

Keywords

Adenoid cystic carcinoma; cancer imaging; cancer metastasis; external auditory canal; solitary pulmonary nodule.

Correspondence

Yong Huang, Department of Radiology, Shandong Cancer Hospital and Institute, Shandong Academy of Medical Sciences, Jinan 250117, China.

Tel/Fax: +86 22 2721 9052

Email: lyh7602@126.com

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metabolism nodule (2.2 cm × 2.5 cm maximal section). An aggressive surgical approach was adopted. A right inferior lobectomy was performed. Histopathologic examination showed metastatic adenoid cystic carcinoma (Fig. 3). After re-evaluating the PET-CT images, another small high-metabolism lesion was found in the left external auditory canal. Ear, nose, and throat doctors performed resection of the tumor. Pathological examination showed adenoid cystic carcinoma of the external auditory canal. Cisplatin and 5-Fluorouracil, combined with Cetuximab, were given and the left external auditory canal received external radiation therapy. The postoperative course was uneventful and the patient was discharged after 30 days.

Adenoid cystic carcinoma is an uncommon tumor that rarely involves the external ear canal.^{1,2} Pulmonary metastatic lesions are easy to misdiagnose as primary lung cancer. In this case, we have shown that metastatic adenoid cystic carcinoma of the external auditory canal could present as SPN. Nuclear

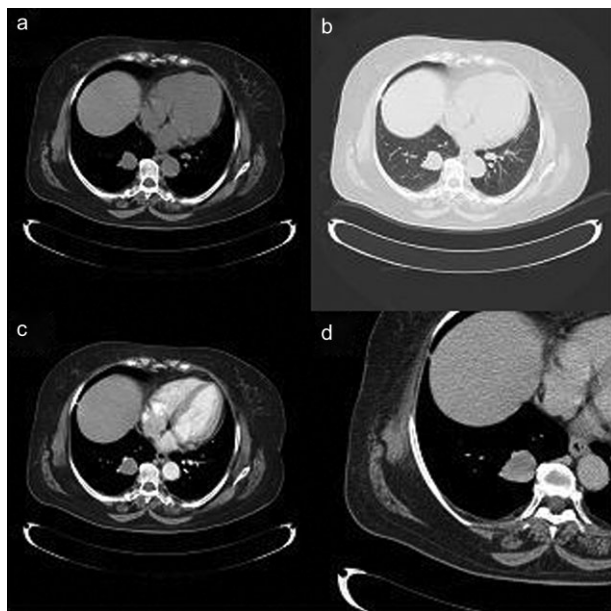


Figure 1 Chest computed tomography (CT) shows a solitary pulmonary nodule (SPN) in the inferior lobe of the right lung. (a) plain scanning; (b) lung window; (c) early contrast-enhanced CT scan; (d) delayed contrast-enhanced CT scan.

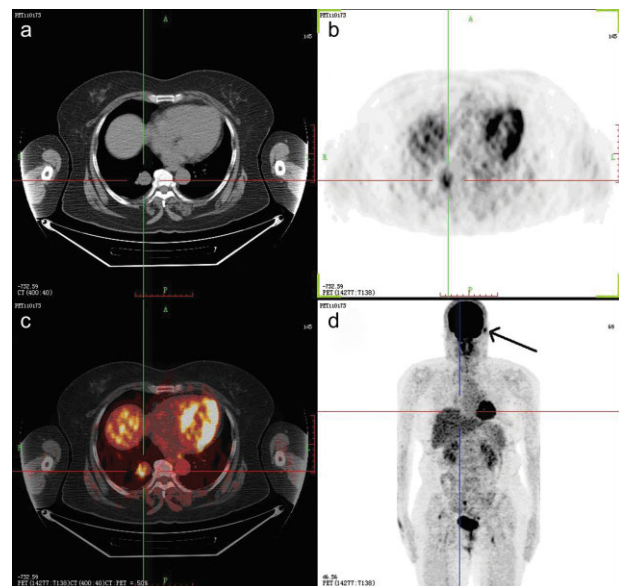


Figure 2 Chest positron emission tomography-computed tomography (PET-CT) scan. (a) axial view, CT in mediastinal window; (b) PET images; (c) fused PET/CT; (d) anterior maximum intensity projection PET images showing a small high-metabolism lesion found in the left external auditory canal.

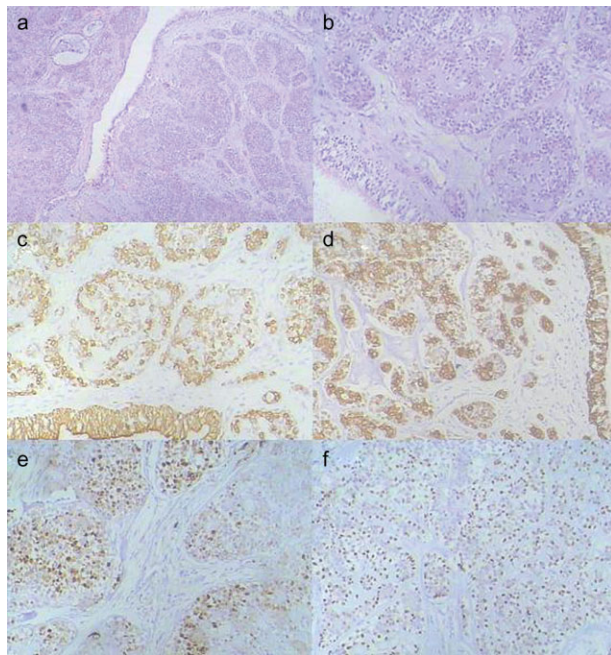


Figure 3 Pathological examinations. (a) HE $\times 40$; (b) HE $\times 100$, (c) CK8/18 stain, $\times 100$; (d) 34 β E12 stain, $\times 100$, (e) S100 stain, $\times 100$; (f) p63 stain, $\times 100$.

medical techniques, such as single photon emission computed tomography (SPECT)³ and PET-CT could provide helpful information for SPN diagnosis.

Disclosure

No authors report any conflict of interest.

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