

Exceptional renal metastasis from adenoid cystic carcinoma of nasopharynx seen on ^{18}F -FDG PET/CT

Abstract

A 48-year-old man with a history of adenoid cystic carcinoma (ACC) of the nasopharynx, eight years after radio-chemotherapy, fluorine-18-fluorodeoxyglucose positron emission tomography/computed tomography (^{18}F -FDG PET/CT) was performed for follow-up. A lobulated mass with moderate and heterogeneous ^{18}F -FDG uptake in the right kidney was observed, which was pathologically proven as ACC metastasis.

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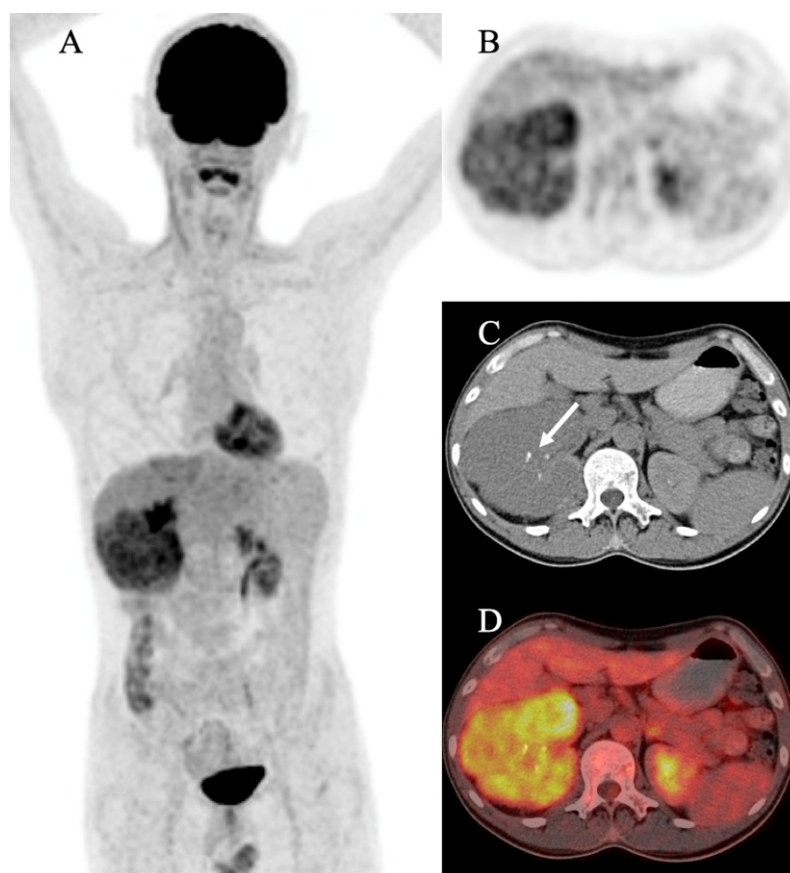


Figure 1. A 48-year-old man with a history of radio-chemotherapy of adenoid cystic carcinoma (ACC) of the nasopharynx eight years ago, fluorine-18-fluorodeoxyglucose positron emission tomography/computed tomography (^{18}F -FDG PET/CT) was performed for follow-up. Fluorine-18-FDG PET/CT maximum-intensity-projection (MIP) (A) image revealed a mass with moderate ^{18}F -FDG uptake in the right kidney. Transaxial PET (B), non-contrast-enhanced CT transaxial (C), and PET/CT fusion (D) images showed a lobulated mass with moderate and heterogeneous ^{18}F -FDG uptake in the right kidney, and several calcified nodules were observed in the mass (arrow). The ACC metastasis of right kidney was suspicious. Subsequently, right nephrectomy was performed. Renal metastasis from ACC was confirmed pathologically, and the Ki-67 was 25% to 35%. Adenoid cystic carcinoma is an uncommon malignant tumor arising mainly from secretory glands, most commonly the major and minor salivary glands of the oral and maxillofacial region, whereas it rarely occurs in the nasopharyngeal [1, 2]. Renal metastases from ACC of nasopharynx are extremely rare and reports of specific renal involvement on ^{18}F -FDG PET/CT have not been extensively found until now [3-6]. As in the above cases, the features of renal metastases from ACC are slightly well-margined lower-density mass with low-moderate radioactive concentration on ^{18}F -FDG PET/CT. Based on autopsy series, the incidence rate of renal metastasis ranges from 3% to 15%, lung, breast, gastric and colon cancer, and melanoma being the most frequent tumors described [7]. Renal metastases mainly present as solid or cystic masses and hemorrhagic or diffuse lesions [7], and are generally small, multiple, bilateral, wedge-shaped, with less exogenous growth and generally located in the renal capsule [8], which is frequently misdiagnosed and can mimic radiologically a primary renal tumor. It is often asymptomatic and rarely exhibits hematuria as it is usually located in the vascular plexus cortex without any tumor infiltration of the adjacent urothelium [7]. Fluorine-18-FDG PET/CT is of great importance in the treatment of distant metastases of ACC, particularly metastases to uncommon sites.

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