

CLINICAL IMAGES

Persistent dry cough: an unusual presentation of renal cell carcinoma

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A 68-year-old woman presented with a 3-month history of persistent, gradually worsening dry cough, which, on occasion, woke her from sleep. She had no history of hemoptysis, recent respiratory tract infection, postnasal drip, asthma, seasonal allergies, travel or constitutional symptoms. She had quit smoking 10 years earlier. Her medical history included gastroesophageal reflux disease and benign adenomas of the colon. Her current medications included rabeprazole, atorvastatin and trazodone. The results of extensive investigations, including chest radiography, spirometry, flexible nasendoscopy and a battery of blood tests, were negative, except for microcytic anemia, which we attributed to iron deficiency (hemoglobin 107 [normal 123–157] g/L).

Six months following the initial presentation, our patient returned with worsening cough and complaints of drenching night sweats and unexplained weight loss of 5 lbs. A contrast-enhanced computed tomography (CT) scan of the thorax showed prominent varicosities on the right side of the retroperitoneum. A subsequent CT of her abdomen and pelvis showed a hypervascular mass in the upper pole of the right kidney (Figure 1), with no evidence of retroperitoneal lymphadenopathy.

Our patient underwent open right radical nephrectomy for renal cell carcinoma (Führman grade 3, clear cell, with negative margins); there was no evidence of hepatic invasion. Following the surgery, the patient's cough completely resolved and did not recur during the next 2 years of follow-up.

This patient's case represents a rare cause of chronic cough and an unusual presentation of renal cell carcinoma. Renal cell carcinomas secrete prostaglandins (mainly prostaglandin E₂), which have been implicated in enhancing the cough reflex via the EP₃ receptor pathway.^{1,2} In our patient's case, a mass effect by the tumour on the posterior diaphragm may have also contributed to irritation and reflex cough.³



Figure 1: Computed tomograph showing a large hypervascular right renal mass associated with the upper pole (arrow) in a 68-year-old woman with cough. There are multiple tumour lobulations that indent the hepatic capsule.

References

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3. Chung KF, Pavord ID. Prevalence, pathogenesis and causes of chronic cough. Management of chronic cough. *Lancet* 2008; 371:1364-74.

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