

Pulmonary embolism due to compression of the inferior vena cava by a solitary right giant renal cyst

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A 58 year-old male, who was a 30 pack/year smoker with a vague medical history of cystic kidney disease, was admitted because of pleural chest pain of sudden onset, 24 hours in duration, located in the right lower hemithorax. Based on a computed tomography pulmonary angiogram (CTPA) the diagnosis of pulmonary embolism was established and treatment with low molecular weight heparin was initiated (Figure 1). During his first day of hospitalization he reported a mild but persistent pain in his right renal region, and, although the clinical examination was unremarkable, abdominal CT was performed. A solitary cyst, 16 cm in diameter, causing enlargement of the right kidney and severe compression of the inferior vena cava, was the most remarkable finding (Figure 2). Dynamic renal scan showed that, despite its unique morphology, the right kidney was functioning adequately. An inferior vena caval filter was put in place and urological intervention was scheduled in order to preserve as much as possible of his renal function and to relieve the compression of the inferior vena cava.

Retroperitoneal diseases (e.g., kidney malignancies, polycystic disease of the right kidney, hydronephrosis, retroperitoneal fibrosis or trauma



FIGURE 1 Computed tomographic pulmonary angiogram in a 58 year-old male showing pulmonary embolism in a segmental branch of the right pulmonary artery.

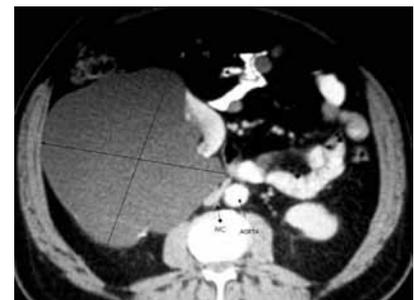


FIGURE 2 Abdominal computed tomography in a 58 year-old male demonstrating a solitary right giant renal cyst causing significant compression of the inferior vena cava (arrow-IVC). The aorta is also demonstrated (arrow-AORTA).

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and haematoma) can infrequently result in significant compression of the inferior vena cava, and subsequently, because of venous stasis and turbulent flow, deep vein thrombosis and pulmonary embolism, which may rarely be the first manifestation of the problem.^{1,2} Consequently, in patients presenting with pulmonary embolism, when a history or clinical signs of abdominal pathology are elicited, a thorough investigation of the abdomen is essential.

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