

Case illustrated

Multiple gas emboli complicating an emphysematous pyelonephritis

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ABSTRACT

We report a rare case of emphysematous pyelonephritis complicated by septic shock and multiple gas emboli in the pulmonary artery (with transient cor pulmonale), coronary artery (with transient acute coronary syndrome).

A 64-year-old woman, with poorly controlled diabetes mellitus and past medical history of relapsing urinary tract infection was admitted to the intensive care unit for lower back pain with acute respiratory failure and septic shock. She had travelled to India two months before and had taken nonsteroidal anti-inflammatory drugs prior to hospital admission. There was no evidence for pneumonia or ARDS (acute respiratory distress syndrome), but the initial echocardiography revealed severe acute cor pulmonale, along with akinesia of the interventricular septum. The electrocardiogram showed a transient ST segment elevation in the anteroseptal leads, and the coronary angiogram revealed atheromatous

coronary arteries without any severe stenosis. An abdominal computed tomography revealed gas collection in the parenchyma, perinephric space (Fig. 1A) and vein of the left kidney (Fig. 1B). The control echocardiography performed at day-1 showed no more acute cor pulmonale or akinesia. The patient received a diagnosis of emphysematous pyelonephritis complicated by septic shock and multiple gas emboli in the pulmonary artery (with transient cor pulmonale), coronary artery (with transient acute coronary syndrome). *Klebsiella pneumoniae* was isolated in blood, urine and kidney cultures. The patient was treated with antimicrobials and nephrectomy with a favorable course [1].

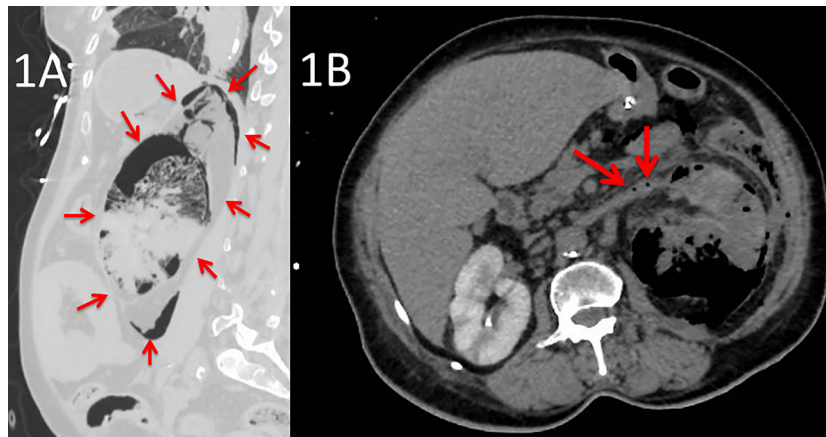


Fig. 1. Gas collection in the parenchyma, perinephric space (1A), gas in vein of the left kidney (1B).

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Contributors

KR, AL, NdP and AM cared for the patient, searched the scientific literature, prepared the figures, and wrote the report.

Declaration of interests

We declare no competing interests.

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

References

- [1] Pontin AR, Barnes RD. Current management of emphysematous pyelonephritis. *Nat Rev Urol* 2009;6:272–9. <http://dx.doi.org/10.1038/nrurol.2009.51>.