

A rare complication of ESWL: Focal metastatic multiple organ abscesses in a horseshoe kidney

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CASE REPORT

A-37 year-old-male patient was admitted to our emergency department with high fever and respiratory distress findings. In addition to high fever 39.0 C, physical examination revealed rales on the middle and lower zones of lungs. Biochemical analysis data revealed leucocytosis and elevated sedimentation and *C-reactive protein* (CRP) levels. While blood urea and creatinine levels were in normal range, blood glucose was 796 mg/dl. Urine analysis demonstrated microscopic haematuria and pyuria. Radiologic evaluation showed nodular lesions in lungs on anterior-posterior (AP) chest radiography (Figure 1a). With all these findings the patient was hospitalized by chest diseases department with a diagnosis of acute pneumonia and hyperglycemia. Arterial blood gases evaluation revealed the presence of respiratory acidosis and metabolic alkalosis. Management was consisted of antibiotherapy along with blood glucose level regulation and oxygen treatment. Because of the persistence high fever despite efficient antibiotherapy during clinical follow-up, in addition to pleural fluid examination; Thorax and Abdomen CT were performed for further clarification of the clinical status. Tomographic examination did show multiple, irregular shaped metastatic masses with a largest diameter of 4 cm in lungs and hypodense mass lesion with a largest diameter of 2,6 cm in the right lobe of the liver (Figures 1b, 2a). On the other hand, horseshoe kidney malformation with multiple opaque calculi in pelvicaliceal system, renal parenchymal nodular lesions (with a largest diameter of 3 cm) and apparent perirenal fluid collection were present among radiologic findings (Figure 2b). Patient was re-evaluated by our urology department with respect to the perirenal fluid collection and a malignancy of unknown origin with multiple metastases in lung, liver and kidney. The most important data obtained from

the detailed anamnesis demonstrating a history that these complaints began after 3 ESWL sessions for the kidney stones in a lithotripsy center.

Taking this very important history into accounts, CT scans obtained before ESWL were re-evaluated and no pathologic radiologic finding could be demonstrated prior to ESWL procedure leading us to consider suspected metastatic masses as focal abscesses. In the light of these findings a percutaneous drainage of the fluid collection in the right perirenal area was performed and the obtained purulent fluid was sent to culture-sensitivity tests.

Culture results showed the growth of Extended-spectrum β -lactamase (ESBL) - producing *Escherichia coli* and antibiotherapy based on the culture sensitivity tests was immediately initiated (imipenem, 4 x 500 mg, IV).

Clinical status of the case improved dramatically following the intervention and antibiotherapy. The lesions on renal, hepatic and lung paranchyme had started to regress on the 7th day of therapy and drain tube was removed on 15th day. On the control CT scans obtained after 4 weeks the lesions on renal, hepatic and lung paranchyme regressed to a considerable extent together with the fluid collection on right perirenal area (Figures 3a, 3b).

CONCLUSIONS

In the light of our findings and very limited data present in the literature we may say that urine sterilization before ESWL is an utmost important issue before stone disintegration and if not possible ESWL should be performed under well planned antibiotic management. Risk of bacteriemia could be reduced by administering prophylactic antibiotic before ESWL even in cases with sterile urine cultures and the ones carrying the predisposing risk factors as mentioned above.



Figure 1.

A. Anterior-posterior chest radiography showing multiple nodular lesions in lungs.

B. Computerized tomography (thorax) showing multiple nodular lesions in lungs.

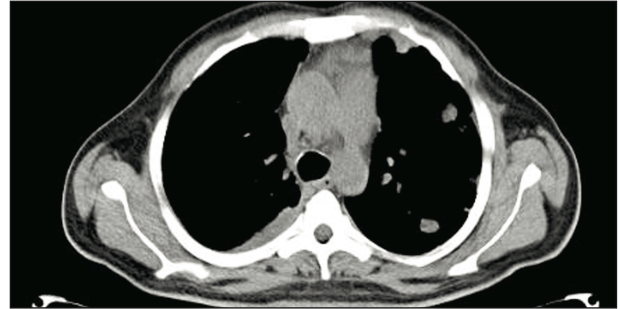
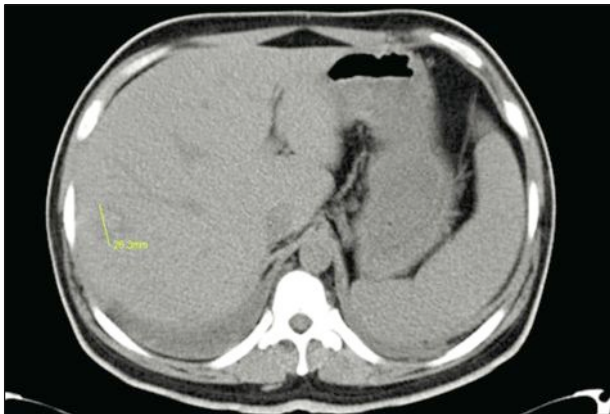


Figure 2.

A. Computerized tomography (abdomen) showing hypodense mass lesion in liver.



B. Computerized tomography (abdomen) showing horseshoe kidney malformation and the nodular lesions in kidney, apparent fluid collection on right perirenal area.

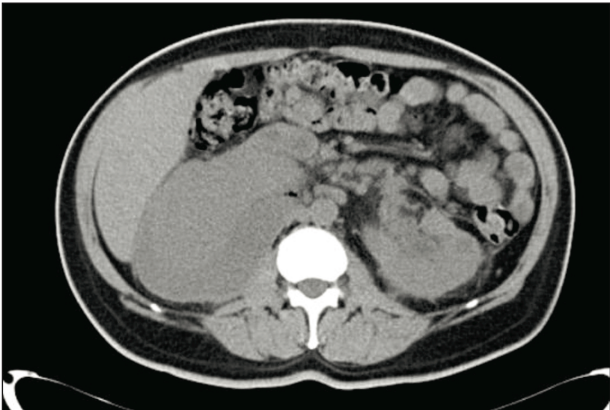
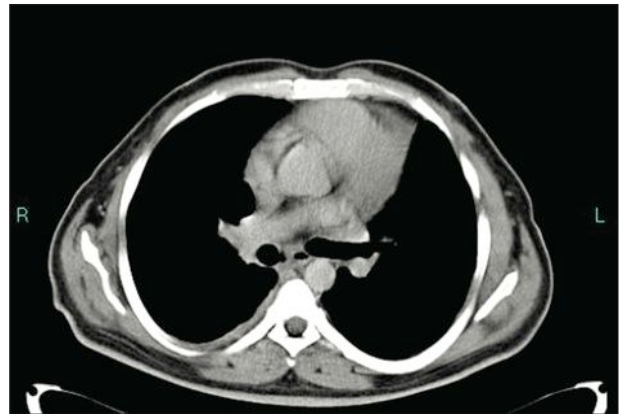


Figure 3.

A. Control computerized tomography (thorax) showing regression of the lesions after the antibiotherapy in lungs.



B. Control computerized tomography (abdomen) showing regression of the nodular lesions in kidney and regression of perirenal fluid.

