Spontaneous Bilateral Renal Subcapsular Hematoma as a Possible Complication of Myeloproliferative Disorders

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A 64-year-old male had bilateral renal subcapsular fluid accumulation evident on abdominal sonography performed during postoperative follow-up after surgery for a hepatoma. There were no clinical symptoms, and he had no history of trauma or receiving anticoagulant medication. Spontaneous bilateral renal subcapsular hemorrhage was diagnosed after a series of examinations. He did have an underlying myeloproliferative disorder (MPD), and had received incomplete cytoreductive treatment. Platelet aggregation in MPD is often abnormal, and both bleeding and hypercoagulation complications have been reported. Here we report a rare case of MPD with possible thrombohemorrhagic complications presenting as spontaneous bilateral renal subcapsular hematomas.

Key words: renal hemorrhage, myeloproliferative disorder, thrombohemorrhagic complication

INTRODUCTION

Lesions involving the perinephric spaces include primary and secondary solid neoplasms and fluid collections¹. Perinephric fluid collections may be blood, pus, urine, lymph, exudates or transudates resulting from abnormalities within the kidney or adjacent retroperitoneal structures. Spontaneous renal subcapsular or perirenal hematoma is a relatively uncommon but often diagnostically challenging condition. The most common causes for spontaneous renal subcapsular hematoma are malignant and benign tumors, vascular diseases, infections, nephritis and blood dyscrasias. Here we report a case of asymptomatic bilateral perinephric fluid accumulation subsequently proved to be spontaneous renal subcapsular hematomas. Our patient did not take any anticoagulant medication and had no history of trauma. After other causes of spontaneous renal hematomat were reasonably excluded, the most probable reason for his hematomas was that he had an MPD of the essential thrombocythemia (ET) subtype. Platelet aggregation tests showed defective platelet aggregation in response to the agonists adenosine-5′-diphosphate (ADP) and ristocetin, indicating platelet dysfunction, which might be responsible for the development of the spontaneous bilateral renal subcapsular hematomas.

CASE REPORT

The patient was a 64-year-old male with hepatitis B virus-related liver cirrhosis, child-Pugh class A, and type 2 diabetes mellitus. Hepatoma and an angioma of the spleen were found in 2002, and he underwent enucleation of the liver (segment 7) and splenectomy. In addition, an MPD of the ET subtype was proved by bone marrow biopsy in 2005. He was treated with incomplete hydroxyurea cytoreductive therapy for three months. Bilateral fluid collection in the perirenal space was incidentally noted in follow-up abdominal sonography a few days before this admission in June 2006.

On admission, there was no clinical symptom of arthralgia or abdominal pain. His vital signs were normal, and mental status was intact. A full blood count showed a hemoglobin concentration of 11.4 gm/dl, an elevated white cell count of 29 × 10⁹ cells/l and a platelet count of 1222 × 10⁹/l. Biochemical tests, including renal function and liver function, were unremarkable, but positive hepatitis B surface antigen serology. Urinalysis showed no hematuria or pyuria. The coagulation profile revealed normal prothrombin and activated partial thromboplastin times. Platelet aggregation tests showed aggregation ab-