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腎癌に伴った Spontaneous Subcapsular Hematoma の 1 例

一CT による診断一

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腎癌に伴った Spontaneous Subcapsular Hematoma の 1 例を、今後は CT と放射線治療を同時に行うことが有効と考える。さらに、その診断に際して、(1) spontaneous subcapsular hematoma の原因として、腫瘍によっても考えられるが、腫瘍の存在を疑うこと、(2) CT による診断のみならず、血腫の原因となっ

Introduction

Renal subcapsular, or perirenal, hematomas are usually posttraumatic. Spontaneous subcapsular hematomas are rare, and they may be secondary to nephritis, neoplasms, or vascular lesions such as periarteritis nodosa. This is a report of the CT findings in a case of spontaneous subcapsular hematoma. Computed tomography afforded a diagnosis of this entity, with a suspicion of a coexisting neoplasm.

Case Report

A 33 year-old female was admitted to the Tagawa Municipal Hospital on December 30, 1980, with a
three day history of sharp right upper quadrant pain radiating to the right flank. There was no evidence of recent trauma.

Computed tomography (CT) without contrast material on January 12, 1981, demonstrated an enlarged right kidney, with a crescentic mass of increased attenuation along its lateral margin (Fig. 1) which compressed the renal parenchyma. The mass was considered to be a fresh perirenal or subcapsular hematoma.

On January 27, 1981, she was referred to Kyushu University Hospital for surgery. Physical examination on admission revealed a blood pressure of 120/60 and an oral temperature of 37.4°C. There was right

Fig. 1 The right kidney is enlarged, with a crescent zone of increased attenuation along its lateral margin.

Fig. 2 A low density mass (28 HU) is found in the same area as the crescent zone in Fig. 1, consistent with subcapsular or perirenal hematoma.
upper quadrant tenderness, and hard abdominal mass palpable in the right side of the abdomen. Urinalysis revealed hematuria, but no proteinuria or glucosuria. The blood urea nitrogen was 8mg/dl and the serum creatinine, 0.8mg/dl.

On January 30, she was reexamined using CT with contrast infusion. A low density mass was again found in the right perirenal area, consistent with a subcapsular or perirenal hematoma (Fig. 2). In addition, an irregular low density area was seen in the mid posterior aspect of the right kidney, suggesting a neoplasm (Fig. 3).

Exploration on February 13 was via a right flank approach. The kidney was difficult to mobilize because of its adherence to the peritoneum. There was a hematoma beneath the renal capsule, and when the latter was incised, old gelatinous blood effused. A hard 3×2.5×2.5cm mass was found in the mid posterior margin of the kidney. A right nephrectomy was performed, and histological study revealed adenocarcinoma.

![Image](image-url)  
Fig. 3  30mm lower slice from Fig. 2. An irregular low density area is seen in the mid posterior aspect of the right kidney.

**Discussion**

In Polkey and Vynalek's analyses of 173 cases of spontaneous non-traumatic perirenal and renal hematomas, the most common etiologies were nephritis (30 cases), tumors (22 cases) and renal arterial aneurysms (20 cases). In Novicki and Turlington's analyses of 194 cases of spontaneous perirenal hemorrhage, the etiologies were tumors in 32(16%), nephritis in 50(15%), spontaneous in 30(15%), infection in 23(12%), renal arterial aneurysms in 20(10%), and atherosclerosis in 12(6%).

Both reports cited tumors as one of the most important causes of spontaneous non-traumatic subcapsular or perirenal hematomas. Tumors which may present in this fashion were reportedly hypernephromas and angiolipoma.

CT is useful for diagnosing benign cysts, hydronephrosis, atrophy, cortical scarring, and it provides reliable evidence of tumors. The computed tomographic findings of renal hematomas as summarized by Schaner and Balow include: 1) renal enlargement associated with poor function, 2) a thickened ring confining a subcapsular hematoma, 3) a decrease in the CT number within 5 days of the bleeding episode.
The present case satisfied all three of these conditions, allowing us to diagnose it as a subcapsular hematoma with a coexisting renal neoplasm.

A diagnosis of subcapsular hematoma due to a renal neoplasm carries with it very important clinical significance for decision making concerning therapy. CT provides a rapid noninvasive means of evaluating patients with subcapsular hematomas and renal neoplasms. CT should be the diagnostic method of choice in suspected cases of subcapsular hematoma.

Renal neoplasms are common causes of renal subcapsular hematomas. When a renal irregularity is visualized by CT, a subcapsular hematoma should be considered with the possibility of a coexisting renal cell carcinoma. Otherwise, tumor cells in the perirenal space may be disseminated during surgery.

Conclusion

A case of spontaneous subcapsular hematoma with a coexisting hypernephroma is presented. The keys to diagnosing a renal neoplasm and renal hematoma are: 1) the high frequency of coexisting renal neoplasms as causes of spontaneous nontraumatic subcapsular hematomas, and 2) the demonstration of an irregular renal contour or a solid mass in the kidney by CT examination with the injection of contrast material intravenously.

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References