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# Spontaneous retroperitoneal hematoma: Case report and review of the Literature

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## ABSTRACT

Spontaneous hematoma of renal lodge is a rare entity, the causes are diverse and are dominated by the tumor causes, vascular abnormalities, but also in connection with coagulopathy or anticoagulant therapy. CT remains the gold standard for the etiologic diagnosis, for against arteriography is discussed if the scan is normal or if there is suspicion of arterial disease. Spontaneous retroperitoneal hematoma (SRH) can be fatal, requiring immediate recognition and intervention. There is no consensus regarding the therapeutic strategy. Nevertheless literature recommends a nephrectomy in case of diagnostic uncertainty, the fear of a tumor lesion passed unnoticed, or in case of hemodynamic instability. We report the case of a SRH in a young 45 years of chronic hemodialysis patient. We update through a review of the literature aspects of the diagnostic and therapeutic care of the SRH.

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## Introduction

Spontaneous hematoma of the kidney, described for the first time in 1856 by WUNDERLICH [1], is a rare clinical entity. It can occur on a normal or pathological kidney as pure capsular hematoma or retro peritoneal hematoma. Finally, the bleeding may come from the kidney or retro peritoneal adjacent structures [2]. Thus, the clinical presentation depends on the amount of blood from mild flank pain with hemodynamic instability. CT scan is the gold standard for the diagnosis in these patients because it locates the pathology and also shows the extent of blood loss.

We report the case of a SRH in a young 45 years of chronic hemodialysis patient.

From this observation, we present the clinical and pathological aspects and report our therapeutic strategy. **Observation** 

A 45 year-old patient, hypertensive for 10 years on treatment and chronic renal failure on nephroangiosclerosis dialyzed a rate of 3 sessions per week for 5 years, was hospitalized for left lumbar pain lasting for two days and not yielding as usual analgesics. A clinical examination the patient had a weak franc and palpation of the lumbar fossa syndrome was painful. Initial laboratory tests yields a hemoglobin 4.5 g/dL, the rate wafer was 192,000/mm3, and white blood cells were 8400/mm3. Furthermore there was no hydro electrolytic or renal function disorder. The blood pressure was 100/60 mm Hg.

After the conditioning as onography was performed and revealed peritoneal retro collection of 110 60 mm. The CT angio graphy confirmed the presence of a large hematoma, renal perished of 159X88 mm driving back the kidney (Figure 1,2). This collection fuse at the retro peritoneum with infiltration of retro peritoneal fat and acquired cystic disease of the kidney (ACDK). Angiography was not performed due to lack of means.

After multidisciplinary consultation (urologists, radiologists and intensivists), it was decided a surgical

abstention with strict and regular monitoring with blood counts twice daily to detect any hemorrhaging. And in this context the patient was transfused per dialysis once per two blood units. The hemorrhaging occurred the days prompted us to achieve hemostasis nephrectomy.

Histological examination confirmed the nephroangiosclerosis. The postoperative course was uneventful and the patient was well in control of the third month.



**Figure 1.** CT image showing the hematoma retroperitonal without detectable tumor



Figure 2. CT reconstruction image showing the extension of the retro peritoneal hematoma

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#### Discussion

Spontaneous retroperitoneal hematomain hemodialysis patients could be explained by the bleeding diathesis [2, 3]. Indeed, these patients have a thrombopathy, [4] their platelets have both a reduced response to the aggregation of adenosine diphosphate, epinephrine, and collagen [5] but also show an interaction with the defective under -endothelium. In fact studies have reported that the binding of fibrinogen to adenosine diphosphate was impaired [6, 7]. Additionally, anemia, increased nitric oxide, and the von Willebrand factor deficiencies also explain the bleeding tendency, regardless of the state of the platelets.

However, due to the spontaneous rupture of the kidney often involves malignancy 33.3% of cases (often the clear cell carcinoma, benign tumor 24.4% of cases (often angiomyolipoma), an arteriovenous malformation 17.9% cases (ruptured aortic aneurysm) or in some rare cases infection. [8] With regard to the spontaneous rupture of clear cell carcinoma, the theory that it will be the consequence of a renal congestion due to thrombosis renal vein was supported. However, in the literature include SHR with 1cm tumors. Thus, there is no correlation between the size of the tumor and the breaking frequency. It is deduced so that the potential risk of renal tumors should always be considered when choosing conservative treatment of spontaneous renal failure. [9] CT remains the gold standard with regard to the SHR. It allows both to put a positive diagnosis, the diagnosis of gravity on the importance of blood loss but also the etiological diagnosis with the assessment of renal tumors. In the literature it is reported that either magnetic resonance imaging or angiography showed superiority over the scanner with respect to the detection of renal tumors [10]. (figure 3)



Figure 3. MRI image shows the retro peritoneal hematomawithout detectable tumor

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Furthermore, it is important to remember that the relative risk of kidney cancer is 13.3 to 29 times higher among chronic hemodialysis patients compared to the general population.

Indeed, they have a risk (2.3 to 3.3 %) more important to develop carcinoma. Especially since this risk correlates with the hemodialysis period. Thus, if the period exceeds 10 years the relative risk is 3.8 times higher than for patients who were on hemodialysis for a shorter period. [2]

These data have allowed some authors (Kendall and all) to advocate radical nephrectomy as the most appropriate

therapeutic strategy. [11] However, Bosniak defends a less invasive approach, he carefully monitored with repeated scans until the hematoma resorption order not to disregard cancer will be wiser.

In our case, the CT showed no tumor and the patient's hemodynamic instability forced us made a gesture hemostatic emergency which consisted of a simple nephrectomy. The pathological results reassured us about our support.

When no cause can be found, the assessment must be completed postoperatively with long-term, close surveillance, due to the risk of an undiagnosed neoplastic lesion.

# Conclusion

Spontaneous retroperitoneal haemorrhage is an uncommon occurrence and is easily diagnosed by ultrasonography or CT scan. Occasionally angiography is needed: when CT scan is negative or in the case of vascular disease. Treatment depends on the cause of haemorrhage. Patients presenting with retroperitoneal haemorrhage and having a normal CT scan and angiography should be viewed with suspicion because of high incidence of small renal tumours in these patients.

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