

Intraabdominal front wall hematoma as a rare complication of an uremic patient presenting as a rapidly developing large abdominal mass

Üreminin nadir bir komplikasyonu olarak intraabdominal ön duvar hematomu

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ÖZET: Bu olgu sunumunda, bir kronik hemodializ hastasında nadir bir komplikasyon olarak, spontan olarak oluşmuş büyük bir karın duvarı hematomu sunuldu.

Anahtar kelimeler: **Üremik kanama, karında kitle**

SUMMARY: In this case report, large spontaneously occurring abdominal wall hematoma as a rare complication of uremia in a patient on chronic hemodialysis is reported.

Key words: **Uremic bleeding, abdominal mass**

ALMOST all uremic patients have a bleeding tendency. It has been suggested that they have either platelet dysfunction or an abnormal platelet-vessel wall interaction, abnormal vessel wall structure, effects of uremic toxins are claimed (1,2,3). Furthermore, heparinization for hemodialysis procedure aggravates the uremic hemorrhagic state. Although cutaneous manifestations and epistaxis are seen frequently, intracranial bleeding, pericardial tamponade, intra pleural and gastrointestinal bleeding are the most life threatening presentations (4). Nevertheless, spontaneous or traumatic hematoma can develop and may also be life threatening (5,6). We present here a rare cause of abdominal mass. Because the initial symptoms were abdominal distention, the mass was considered at first as a herniation or strangulation of the bowels or an event related with gall bladder, which was later proved to be a front abdominal wall hematoma.

CASE

A 52 year-old woman was admitted to the emergency department of the hospital, because of a rapidly developing painful mass at the right abdominal quadrant. She had a history of 3 years'hemodialysis maintenance and she had been well until six hours earlier. Forty eight hours be-

fore admission, she was performed an ordinary hemodialysis procedure. The temperature was 37.2°C. The blood pressure was 150/85 mm Hg and the pulse was 104 per minute in the supine position. However, blood pressure measurement showed an evident orthostatic hypotension, seated posture pressure was 110/60 mm Hg and the pulse was 135 per minute. The respirations were 28 per minute and interrupting at the middle of the inspiration. There was no history of blunt abdominal trauma or spontaneous bleeding previously. No cutaneous lesion was found. No nausea or vomiting was complained. She was seeming anxious, pale and sweating. Physical examination revealed an extremely painful mass at the right half of abdomen. The deep palpation could not performed. On auscultation, the sounds of bowel could not be heard at the same area. X-ray films of the abdomen sitting revealed a diffuse homogeneity at the right hemiabdomen (Fig 1). The radiograph of the chest was normal. The white-cell and platelet count were normal. The hematocrit was 14 percent, while two days ago, after the hemodialysis procedure, it was 24 percent. The hematologic and blood chemical values are presented in Table 1.

A transabdominal sonography revealed a mix ecogenic semi solid mass (190 X 110 mm diameter) at the right half, unattached to the liver. Appearance of the gall bladder was normal. Minimal ascites

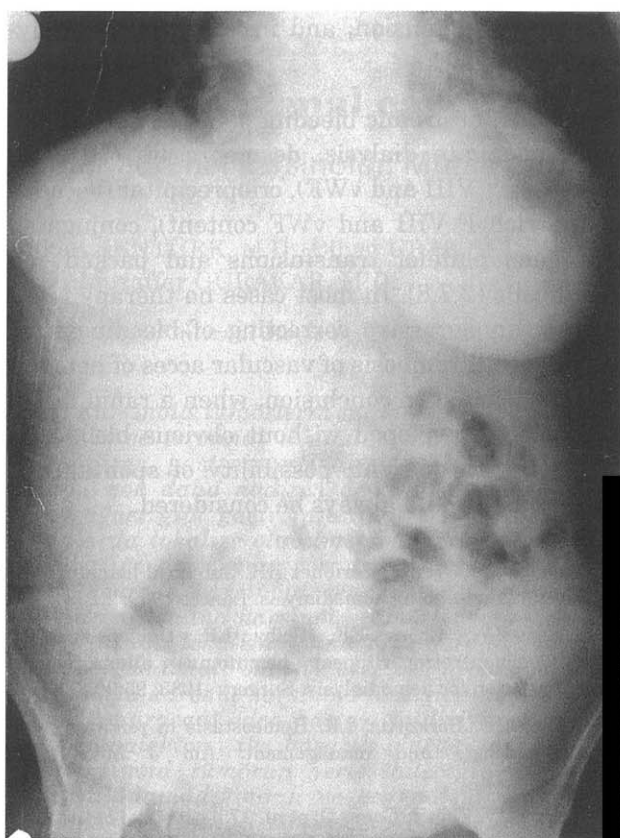


Figure 1. Abdominal X-ray sitting demonstrated a diffuse homogeneous opacity because of displacement of the colon gasses at the right side of the abdomen.

was observed. To clarify the nature of the mass a computed tomographic scan (CT) of the abdomen was performed. The findings on the CT scan were the most suggestive ones of the diagnosis and localization. It was a large wall hematoma under the right rectus abdominis muscle.

Due to the fact that, fresh blood was not available, till providing three units of blood, the patient underwent observation by following hematocrit, blood pressure, heart rate and hourly sonographic

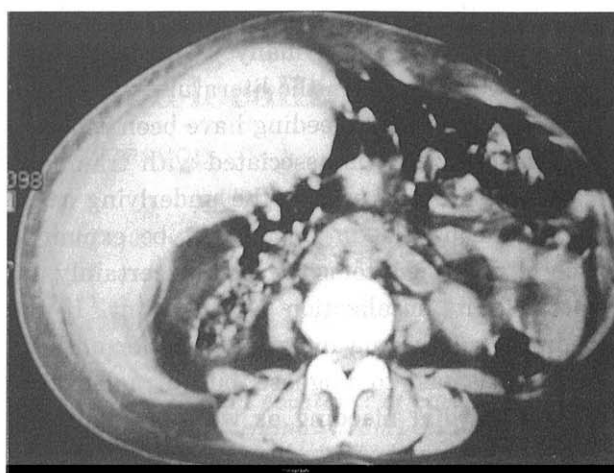


Figure 2. CT scan of the abdomen, showing a large heterogeneous mass occupying most of the right half.

examination. Meanwhile, intravenous solutions were given by avoiding overhydration due to anuric state. Two hours after admission, the patient seemed stable and sonographic evaluation showed no new bleeding. Thus, it was decided to wait and follow observation. After 12 hours, the patient was stable and after 48 hours, she was performed hemodialysis by regional heparinization. One month later, she was on regular hemodialysis programme without any complaint despite the presence of a little ball still there.

DISCUSSION

Renal diseases are often complicated by bleeding complications as well as thromboembolism. When blood urea nitrogen (BUN) is greater than 60 mg/dl, or creatinine greater than 6.7 mg/dl, bleeding time is significantly prolonged (7). The uremic bleeding tendency in renal failure is mainly attributed to uremic platelet disorders and next heparinization for HD procedure (2). Since the

Table 1. Hematologic and blood biochemical values

VARIABLE	VALUE	Two days before
Hematocrit (%)	14.1	25
White-cell count(per mm ³)	14800 (87% gran)	9600
Platelet count (per mm ³)	232000	240000
Alkaline phosphatase (U/L)	197 (n. range: 36-92)	—
Urea nitrogen (mg/dl)	137	48
Plasma creatinine (mg/dl)	11.2	4.2
Clotting time (min)	14	22 (during HD)
Bleeding time (min) (Ivy)	9	—

patients with end stage renal failure have been treated with heparin for many years, its side effects are well known. In the literature, various localizations of uremic bleeding have been reported (4-6). In general, it is associated with traumatic or surgical procedures, but the underlying cause of spontaneous bleeding could not be explained exactly. Initial symptoms of bleeding certainly are related to its localization and amount. If the bleeding occur in an intestinal tract or on body surface, it is easy to diagnose, but intrapleural or intra pericardial bleeding as well as hematoma may be overlooked. Acute blood loss may contribute to the anemic symptoms such as fatigue, or-

thostatic hypotension, and in rare instances, hypovolemic shock.

Treatment of uremic bleeding is mechanical pressure, adequate dialysis, desmopressin (DDAVP, increases F VIII and vWF), cryoprecipitate (because of the rich F VIII and vWF content), conjugated estrogens platelet transfusions and packed red blood cells (2,7,8). In most cases no therapy is required. An aggressive correcting of bleeding time may cause thrombosis of vascular access of hemodialysis patients. In conclusion, when a rapid fall of hematocrit developed without obvious blood loss in an uremic patient, possibility of spontaneous hematoma should always be considered.

REFERENCES

1. Escolar BC, Cases A, Bastida E, et al. Uremic platelets have a functional defect affecting the interaction of von Willebrand factor with glycoprotein IIb, IIIa. *Blood* 1990; 76:1336-1340.
2. Ramuzzi G. Bleeding disorders in uremia. *Pathophysiology and treatment. Adv Nephrol* 1989; 18:171-186.
3. Lindsay RM, Moorthy AV, Koens F, Linton AL. Platelet function in dialysed and non-dialysed patients with chronic renal failure. *Clin Nephrol* 1975; 4:52.
4. Galen MA, Steinberg SM, Lowrie EG. Hemorrhagic pleural effusion in patient undergoing hemodialysis. *Ann Intern Med* 1975; 82:359.
5. Leonard CD, Weil E, Scribner BH. Subdural hematoma in patients undergoing hemodialysis. *Lancet* 1969; 2:239.
6. Sharp KW, Spees EK, Selby LR. Diagnosis and management of retroperitoneal hematomas after femoral cannulation for hemodialysis. *Surgery* 1983; 95:90.
7. Eberst ME, Berkovitz, LR. Hemostasis in renal disease, pathophysiology and management. *Am J Med* 1994; 96:168-179.
8. Vigona GV, Zoja J, Coma D, et al. 17 β estradiol is the most active component of the conjugated estrogen mixture active on uremic bleeding by a receptor mechanism. *J Pharmacol Exp Ther* 1990; 252:344-348.