

## Idiopathic Retroperitoneal Hematoma Presenting as Acute Abdomen

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### ABSTRACT

We experienced a case with symptoms like acute abdomen and neuropathy caused by a hematoma in the retroperitoneal space, and referred to possibility that these phenomena are able to be seen not only in patients under the anticoagulant therapy, but in normal man without any basic lesions.

The author and associates had a chance to encounter a case of retroperitoneal hematoma exhibiting similar symptoms as acute abdomen. In spite of several investigations, we could not detect the point and the cause of bleeding. Since such an idiopathic retroperitoneal hematoma has rarely been reported, here we present the clinical course and some comments.

### CASE REPORT

The patient was a 64-year-old Japanese guard. Family history was unremarkable. As to past history, he had an appendectomy at the age of 20 years and was hospitalized for 3 months with alcoholic liver damage, however, he had never drunk any alcohol thereafter. He had been smoking 15 cigarettes a day for 40 years. No previous history of hypertension, diabetes mellitus and abdominal trauma he had. On July 23, 1985, the patient was attacked by sudden severe pain from the right lower quadrant down to the inguinal region, noting loss of power in the right lower limb at the same time, and was admitted to an emergency hospital on a stretcher. Physical and laboratory findings on admission were as follows; blood pressure 104/50 mmHg; pulse rate 102/min; body temperature 36.2° C; RBC  $320 \times 10^4$ ; Hb 9.5 gr/dl; WBC 8600; urinary RBC (-), sugar (-) and protein (-); and occult blood test for stool (-). ECG showed normal

trace and chest X-ray film revealed no abnormality.

While noting gradual release in abdominal pain and impaired walk, he became unable to eat due to insidiously developed abdominal distension. On the 3rd hospital day, a child-head sized mass got palpable in the right upper quadrant, and subcutaneous suggillation appeared simultaneously all over the right flank. Laparotomy carried out with a suspicion of intraperitoneal hematoma disclosed that the tumor was situated in the right retroperitoneal space and that, despite no pulsation, ruptured retroperitoneal aneurysm was most suspectable. Therefore, after immediate closure of the wound, the patient was transferred to Hiroshima University Hospital. Values for laboratory examinations after transfer are illustrated in Table 1. Having mild degree of anemia and leucocytosis, the patient exhibited slight fall in PT and APTT level at the first determination, but return to normal level after the second one. The childhead sized nonpulsative tumor was still noted in the right upper quadrant, showing, however, no calcification on plain X-ray film of the abdomen. On barium gastric series, stomach and duodenum were demonstrated to be compressed by the tumor in association with disturbed passage of contents (Fig. 1). On CT studies, the center of the tumor was localized in the right side of the IIIrd lumber

Table 1

RBC	441 x 10 <sup>4</sup>	PT	12.7 sec (55%)
WBC	6100	APTT	42.4 sec
Hgb	13.5 g/dl	Fibrinogen	428 mg/dl
Bilirubin	0.9 mg/dl	FDP	10 Mg/ml
GOT	15 U/liter		
GPT	7 U/liter	Ant: DNA Antibody	< x 90
Total Protein	7.1 g/dl	Ant: Nuclear Antibody	< x 10
BUN	15 mg/dl	IG-G	1360 mg/dl
Creatirune	1.0 mg/dl	IG-A	160 mg/dl
		IG-M	110 mg/dl
Serum Amylase	130 U/liter	IG-D	< 2.0
Urine Amylase	320 U/liter	LE	negative
		CRP	0.2 mg/dl
HDL Cholesterol	55 mg/dl	ASO	< x 20
LDL + VLDL Cholesterol	94 mg/dl	Hbs Antigen	negative
FFA	0.5 meg/liter	Hbs Antibody	x 2 <sup>10</sup>



Fig. 1. Duodenum is compressed by the hematoma and barium passage is disturbed.

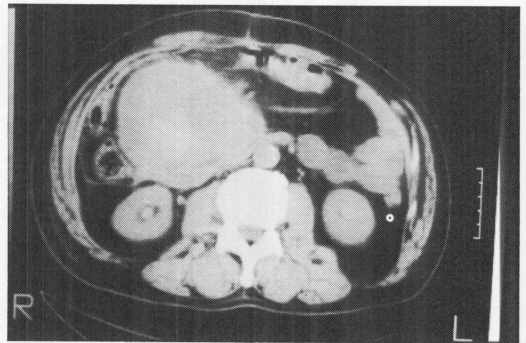
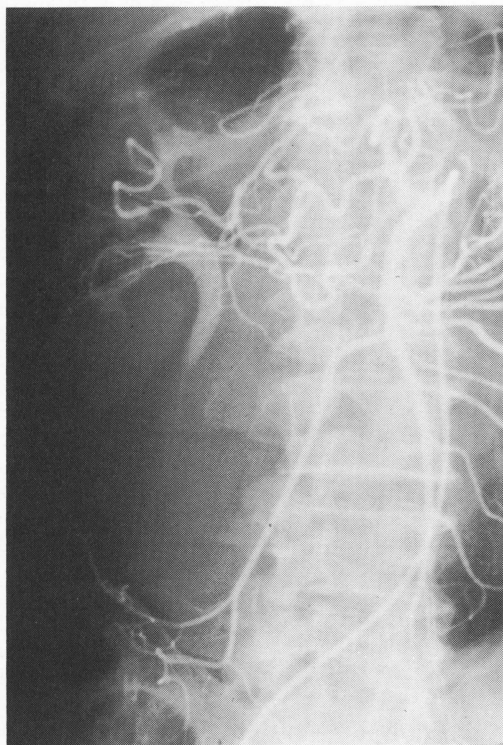


Fig. 2. CT picture of cross section at the level of IIIrd lumbar spine. The hematoma is filled with uniform content hardly enhanced by contrast medium.

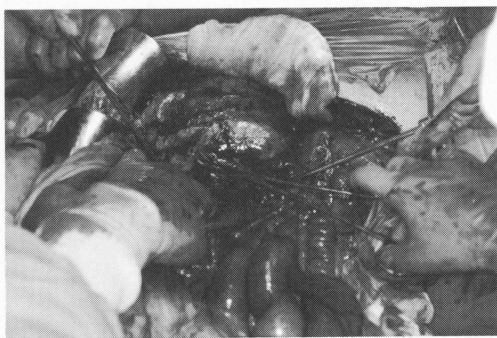
spine, having the size of 8 cm in length, 13 cm in width and 9 cm in depth (Fig. 2). CT results of both kidneys and adrenal glands, liver and spleen showed no abnormal findings. On pyelography, no pelvocalyceal distortion could be found. Digital subtraction angiography performed in order to evaluate the relation of the

tumor with retroperitoneal large vessel provided no abnormal findings in abdominal aorta, renal arteries and common iliac arteries. Even by additional selective angiography, such findings as aneurysm or arterio-venous fistula were not detected in celiac artery, superior mesenteric artery (Fig. 3) and inferior mesenteric artery. Aspiration biopsy cytology of the tumor only revealed the presence of old blood.

From the abovementioned findings, the tumor was identified as retroperitoneal hematoma, and was operated again, leaving the cause of bleeding uncertain. Fig. 4 shows intraoperative findings of the hematoma and Fig. 5 is the figure depicting positional relationship between the tumor and adjacent organs. The hematoma had a wall of 3 — 10 mm in thickness of which inner surface was irregular, including contents

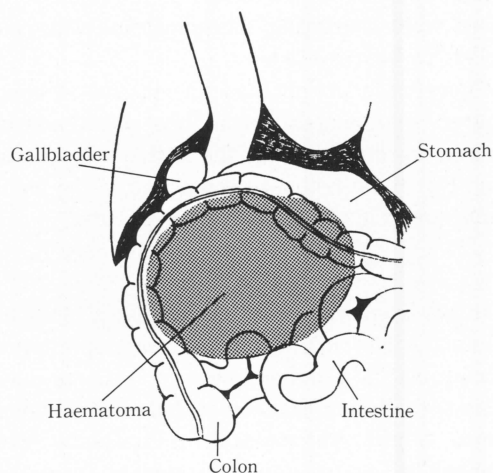


**Fig. 3.** Superior mesenteric angiography. No finding except for compression feature is seen even by serial method.

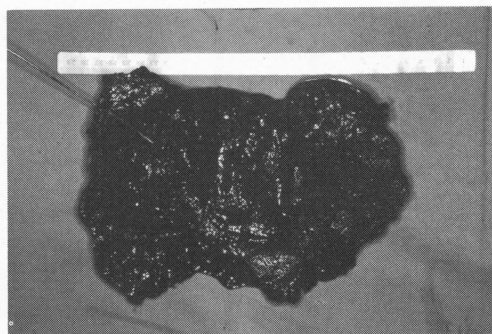


**Fig. 4.** Intraoperative picture of the hematoma. Part of the hematoma has adhesion with part of mesentery and jejunum.

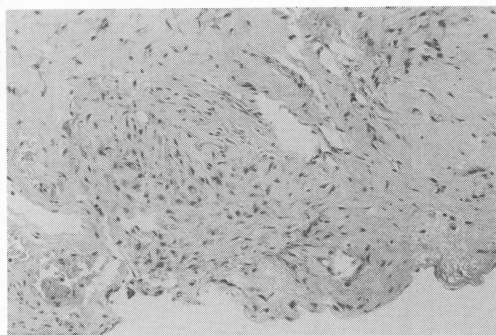
weighing 700 g. So densely the back side of the hematoma wall adhered with hepatoduodenal ligament and parsduodeni of the pancreas head that partial resection of the ventral half of the spheric hematoma wall was forced to carry out, keeping this adhered portion left. Inside surface of the left wall was closed by such a manner as



**Fig. 5.** The hematoma displaces the ascending colon toward right, the transverse colon and the stomach toward cranial and the jejunum and the ileum toward caudal.



**Fig. 6.** Hematoma aspect of the tumor wall is shown as resected hemispherically.



**Fig. 7.** Hematoma wall is consisted of edematous collagenous tissues, containing a great number of fibroblasts, which is estimated as relatively new granulomatous tissue.

buried sutures. About 50 cm of the jejunum injured when managing the hematoma was compelled to be resected.

Though the patient had an episode of minor degree of pancreatitis in the postoperative course, he discharge on the 35th postoperative day. Fig. 6 illustrates resected wall of the hematoma and Fig. 7 its histologic picture.

### DISCUSSION

It has been well documented that a blunt abdominal injury might develop a retroperitoneal hematoma<sup>2,3</sup>. Further, several reports have been seen stating that the retroperitoneal hematoma might be caused in patients with hemophilia<sup>6</sup> and under anticoagulant therapy<sup>4,7</sup>. However, there have been very small reports as for the really idiopathic retroperitoneal hematoma occurring in the patient without any corresponding history. Concerning a review of the literatures, it can be only recognized that Morrison<sup>11</sup>, Jeyakumar<sup>8</sup> and Alkerty<sup>1</sup> reported one case each. McCart<sup>10</sup> stated that with respect to retroperitoneal hematoma other than traumatic or drug-induced origin, some points should be taken into consideration, i.e. (1) rupture of renal or adrenal tumor; (2) pancreatitis; (3) rupture of arteriosclerotic aneurysm; and (4) polyarteritis nodosa. As regards our patient, it is possible to deny the case (1) on the findings of CT and pyelography and to exclude the case (2) because of normal blood and urinary amylase level for consecutive 4 days after the onset of abdominal pain, and the case (3), as well, on angiography. as to the case (4) no findings were obtained suggesting any collagen disease from the history and the laboratory studies. Maratka et al<sup>9</sup> described that owing to anatomically weak effect as tamponade action of the retroperitoneum, a large hematoma could be formed even by rupture of the small vessels. About the symptoms at that time, there have been reported non-obstructive ileus<sup>5</sup>, neuropathy due to compression of nerve root and ecchymosis in the flank, all of which our patient did exhibit.

It was supposed in our case that the hematoma, formed by rupture in any cause of the small vessel localizing about the border between iliopsoas muscle and lumbar quadratus muscle and impossible to be visualized on angiography,

stimulated ileoinguinal nerve and genitofemoral nerve, provoking severe pain from the right lower quadrant to the inguinal region, and transient disturbance in walking was resulted by compression of deeper femoral nerve simultaneously.

### REFERENCES

1. **Alberty, A. and Järvinen, P.** 1983. Spontaneous rupture of the iliacus muscle with retroperitoneal hematoma. *Ann. Chir. Gyn.* **72**: 80–81.
2. **Allen, R.E., Eastman, B.A., Halter, B.L. and Conolly, W.B.** 1969. Retroperitoneal hemorrhage secondary to blunt trauma. *Am. J. Surg.* **118**: 558–561.
3. **Baylis, S.M., Lansing, E. H. and Glas, W.W.** 1962. Traumatic retroperitoneal hematoma. *Am. J. Surg.* **103**: 477–479.
4. **Curry, P.V. and Bacon, P.A.** 1974. Retroperitoneal hemorrhage and neuropathy complicating anticoagulant therapy. *Post. Grad. Med. J.* **50**: 41–44.
5. **Drew, J.H.** 1974. Ileus in retroperitoneal hematoma. *Med. J. Aust.* **1**: 246–248.
6. **Goodfellow, J., Fearn, C.B.D.A. and Matthews, J.W.** 1967. Iliacus hematoma. *J. Bone Joint Surg.* **49B**: 748–756.
7. **Hodine, E. and Dass, T.** 1969. Spontaneous retroperitoneal hemorrhage complicating anticoagulant therapy. *Ann Surg.* **170**: 848–851.
8. **Jeyakumar, S.S. and Adegbenro, A.** 1983. Massive idiopathic retroperitoneal hematoma presenting as acute abdomen. *Indian J. Surg.* **45**: 60–62.
9. **Marakta, H.S. and Viklicky, J.** 1961. Syndrom krváčení do m. psas prispevek ke komplikacím protisrazlive leccry. *Vnitřní Lekar.* **7**: 1131–1134.
10. **McCart, J.** 1976. Intraoperative and retroperitoneal hemorrhage. *Radiol. Clin. N. Am.* **14**: 391–405.
11. **Morrison, F.S. and Wurzel, H.A.** 1964. Retroperitoneal hemorrhage during heparin therapy. *Am. J. Cardiol.* **13**: 129–332.