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Bilateral Iliopsoas Hematomas under Sedation:A Complication of Postoperative Therapy after Coronary Artery Bypass Grafting

Dai Une* Shuji Shimizu†

Koji Nakanishi‡

*Department of Cardiovascular Surgery, Saiseikai Imabari Hospital,

†Department of Cardiovascular Surgery, Saiseikai Imabari Hospital,

‡Department of Cardiovascular Surgery, Saiseikai Imabari Hospital,

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Abstract

We report a case of bilateral iliopsoas hematomas that occurred during postoperative therapy after coronary artery bypass grafting (CABG). An 81-year-old woman receiving anticoagulant and antiplatelet therapies under sedation after CABG developed sudden anemia and went into shock. Abdominal ultrasonography showed a right retroperitoneal hematoma. She improved gradually with conservative treatment. Many patients with an iliopsoas hematoma complain of low-abdominal pain or femoral neuropathy, but such local signs may be absent under sedation. In anticoagulant and antiplatelet therapies under sedation, when the cause of anemia and shock is not clear, we should suspect peritoneal hematoma and examine the peritoneal space.

KEYWORDS: iliopsoas, hematoma, coronary artery bypass grafting

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Case Report

Bilateral Iliopsoas Hematomas under Sedation: A Complication of Postoperative Therapy after Coronary Artery Bypass Grafting

Dai Une*, Shuji Shimizu, and Koji Nakanishi

Department of Cardiovascular Surgery, Saiseikai Imabari Hospital, Imabari, Ehime 799–1592, Japan

We report a case of bilateral iliopsoas hematomas that occurred during postoperative therapy after coronary artery bypass grafting (CABG). An 81-year-old woman receiving anticoagulant and antiplatelet therapies under sedation after CABG developed sudden anemia and went into shock. Abdominal ultrasonography showed a right retroperitoneal hematoma. She improved gradually with conservative treatment. Many patients with an iliopsoas hematoma complain of low-abdominal pain or femoral neuropathy, but such local signs may be absent under sedation. In anticoagulant and antiplatelet therapies under sedation, when the cause of anemia and shock is not clear, we should suspect peritoneal hematoma and examine the peritoneal space.

Key words: iliopsoas, hematoma, coronary artery bypass grafting

Anticoagulant and antiplatelet therapies are associated with various haemorrhagic complications. Some cases of iliopsoas hematoma have been reported, but bilateral hematomas are very rare [1]. Spontaneous iliopsoas hematoma may occur even after heart surgery, because anticoagulant and antiplatelet therapies are widely used in the perioperative care of patients undergoing heart surgery.

In most cases, iliopsoas hematoma is associated with femoral palsy, lumbar pain or groin pain as early local signs [1]. However, local signs may be absent under sedation. During perioperative therapy for coronary artery bypass grafting (CABG) under sedation, anemia and shock are sometimes the only signs of iliopsoas hematoma. Even in muscular hematomas in hemiplegic patients, it has been reported that local signs were not obvious, while general signs of hypovolemia and anemia were more frequent [2]. After CABG, shock results from various conditions such as myocardial infarction, low output syndrome, graft occlusion, postoperative bleeding, cardiac tamponade and hypovolemia. Clinicians must attempt to immediately diagnose a complication and perform appropriate treatment.

We report a case of bilateral iliopsoas hematomas that occurred during anticoagulant and antiplatelet therapy under sedation after CABG and was associated with anemia and shock. This report may alert clinicians to be aware of the potential for this rare complication as a differential diagnosis.

Case Report

An 81-year-old woman was admitted for acute cardiac failure associated with dyspnea. She had a history of coronary artery bypass grafting (saphenous vein graft (SVG) to right coronary artery and SVG to left anterior descending artery (LAD)) for angina

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*Corresponding author. Phone:+81-86-225-7111; Fax:+81-86-223-5265
E-mail:daune@hotmail.co.jp (D. Une)

pectoris 12 years ago. Since then, she had received ticlopidine for follow-up of her angina pectoris. Although angiography showed occlusions of both vein grafts 5 years after surgery, she had no symptom of cardiac ischemia until this admission.

Angiography showed unstable angina pectoris, 100% occlusion of the right coronary artery, 75% stenosis in the left main trunk and 90% stenosis in the LAD. Despite medical management, the heart failure worsened. Continuous intravenous infusion of heparin was started because heart failure took a turn for the worse. CABG was performed again (left internal thoracic artery-LAD, SVG-right coronary artery, SVG-circumflex on pump) 14 days after admission. Anticoagulant (heparin) therapy was continued even after CABG. Activated coagulation time (ACT) was measured every 12 h. ACTs were between 120 and 190 sec. Antiplatelet (aspirin at 100 mg/day and cilostazol at 200 mg/day) therapy was started 5 days after the operation through a gastric tube. The patient developed anemia and went into shock 8 days after the operation. A tender mass in the right lower abdominal quadrant was palpable on physical examination. She had been unconscious from anesthesia when she went into shock. Perioperative management was not directly related to the iliopsoas muscles.

Abdominal ultrasonography showed a right retroperitoneal hematoma, and computed tomography revealed bilateral iliopsoas hematomas (Fig. 1). Angiography showed multiple focuses of bleeding through lumbar arteries and iliolumbar arteries (Fig. 2). On the 8th day after the operation, the platelet count was $8.6 \times 10^4/\mu$l, prothrombin time-international normalized ratio (PT-INR) was 1.12, activated partial thromboplastin time (APTT) was 27.3 sec and hemoglobin had dropped to a minimum of 7.4 g/l. A blood transfusion was performed.

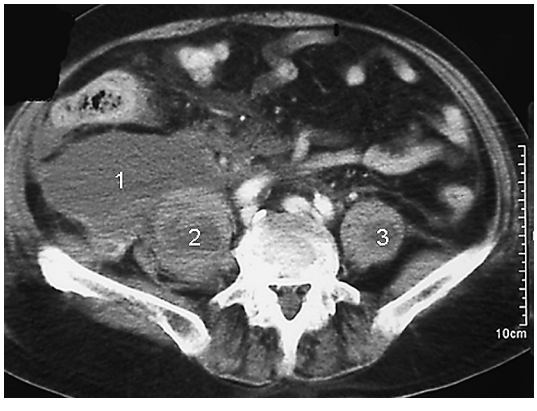

Fig. 1 A computed tomography scan image showing a right retroperitoneal hematoma (1) and hematomas within the bilateral iliopsoas muscles (2 and 3).

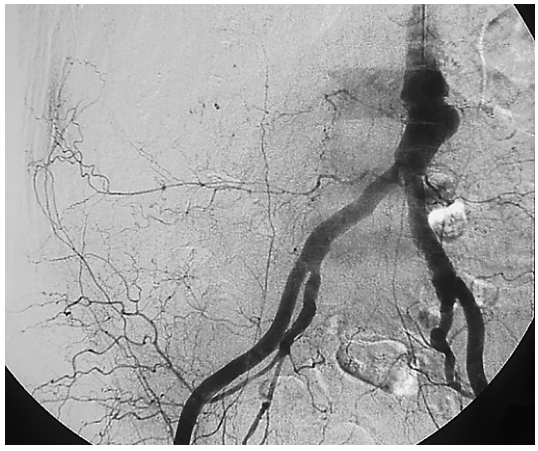

Fig. 2 An angiography image showing multiple focuses of bleeding through lumbar arteries and iliolumbar arteries.

We chose conservative therapy and discontinued anticoagulant and antiplatelet therapies.

The patient's hemodynamic condition gradually became stable after a blood transfusion. On the 21st day after the operation, she recovered from anesthesia soon after anesthesia was stopped. She had mild weakness in the right quadriceps muscle.

Discussion

Anticoagulant or antiplatelet therapy is widely used in heart surgery. However, there have been few reports of an iliopsoas hematoma occurring in the perioperative period of heart surgery. Spontaneous iliopsoas hematoma has been reported as a complication of anticoagulant therapy or antiplatelet therapy for various diseases [1, 3–6]. Many cases of spontaneous iliopsoas hematoma due to heparin therapy have been reported [4], and a few cases of retroperitoneal hemorrhage secondary to antiplatelet therapy have been reported [5].

Spontaneous hematomas originate from tears in muscle fibers and are rarely bilateral [7]. Small vessel arteriosclerosis [8] or a phenomenon related to a thrombotic genesis involving the adrenal glands may or may not correlate with the presence of heparin-

induced immune microangiopathy [9]; they are the most accepted pathogenetic processes [10].

Treatment of spontaneous iliopsoas hematomas depends on the speed of onset, volume and degree of neurological impairment [11]. For smaller hematomas and moderate neurological symptoms, a conservative approach with bed rest is justified [12], whereas large hematomas and severe motor function inhibition require mandatory surgical treatment by decompression and drainage [13]. In addition, if patients remain hemodynamically unstable, surgical arrest of bleeding is required. In most such cases, however, patients are not candidates for surgical treatment. Transcatheter arterial embolization has been reported to be safe and beneficial as an alternative procedure [14]. We chose conservative therapy for our patient because the hematomas were not large, and our patient recovered soon from shock with blood transfusion. Conservative treatment resulted in a good outcome.

Diagnosis of a retroperitoneal hematoma is difficult under perioperative sedation of heart surgery but is not difficult in an awake state. Under sedation, patients with an iliopsoas hematoma cannot complain of common early signs such as femoral neuropathy, lumbar pain and groin pain. This report may help clinicians to become aware of the possibility of this rare complication as a differential diagnosis.

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