Spontaneous massive intraperitoneal hematoma accompanied by acute severe anemia after low-dose thrombolytic therapy

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Hemorrhagic complications may occur after thrombolytic therapy. An 80-year-old woman was admitted with acute anteroseptal myocardial infarction (MI) at three hours of onset. Half-dose streptokinase (750,000 U) along with conventional MI agents was initiated. At 15 hours of hospitalization, the patient began to complain of abdominal pain and distention of increasing intensity. Abdominal computed tomography demonstrated a huge intraperitoneal hematoma, 15 x 14 x 12.5 cm in size, located anterior to the bladder, compressing the bladder. There was a dramatic decrease in hemoglobin level from 12.5 gr/dl (before thrombolysis) to 6.6 gr/dl. The anemia was corrected urgently with four units of blood transfusion. During follow-up, the size of the hematoma diminished and surgical intervention was not considered.

Key words: Anemia; hematoma; myocardial infarction; streptokinase/adverse effects; thrombolytic therapy/adverse effects.

An 80-year-old woman was admitted to our centre with acute anteroseptal MI at three hours of onset. Findings of physical examination were normal including blood pressure (120/80 mmHg). The electrocardiogram (ECG) demonstrated ST-segment elevation and pathologic Q waves in leads V1-V4, and ST-segment depression in leads D2, D3, and aVF. Half-dose streptokinase (750,000 U) along with conventional MI therapy (beta-blocker, nitrate, etc.) was initiated. After thrombolytic therapy, serial ECG recordings demonstrated ST-segment normalization in the related leads with concomitant diminution of chest pain. At 15 hours of hospitalization, the patient began to complain of abdominal pain and distention of increasing intensity. Prompt abdominal ultrasonography demonstrated an indistinct mass-like structure in the lower abdomen. For better visualization of the mass, abdominal computed tomography was performed, which demonstrated a huge intraperitoneal hematoma (15 x 14 x 12.5 cm) located anteri-
or to the bladder (Fig. 1). The hematoma appeared to compress the neighboring organs including the bladder. There was no other coexistent intra-abdominal pathology. The patient had no history of an invasive procedure (surgery, angiography, etc.), trauma, or bleeding diathesis. Hemoglobin decreased from a level of 12.5 gr/dl (before thrombolysis) to 6.6 gr/dl. The ensuing anemia was corrected urgently with four units of blood transfusion. During follow-up, the size of the hematoma diminished and surgical intervention was not considered.

**DISCUSSION**

Thrombolytic therapy is considered a major breakthrough in the treatment of acute MI.\(^1\) Bleeding complications may occur after thrombolysis, but most episodes are generally minor with all thrombolytic agents.\(^2\) Bleeding due to thrombolysis usually stems from a perivascular access site, mucosal (oral, gastrointestinal, urinary, etc.) or skin/soft tissue. Bleeding episodes may be more serious in patients requiring invasive procedures.\(^3\) The most feared bleeding complication due to thrombolysis is intracerebral bleeding, which is encountered in 0.4% of patients.\(^4\) Older age, female gender, and low body mass index are regarded as major risk factors for bleeding after thrombolysis. Some unusual cases with spontaneous pulmonary hemorrhage,\(^5\) splenic hemorrhage,\(^6,7\) large subesophageal hematoma,\(^8\) and rectus muscle hematoma\(^10\) have been associated with thrombolytic therapy.

The case presented here had some risk factors (older age, female gender), but had no history of an invasive procedure, trauma, or bleeding diathesis. She developed a huge spontaneous intraperitoneal hematoma (with acute severe anemia) compressing the bladder after half-dose streptokinase regimen. To our knowledge, such a huge spontaneous intraperitoneal hematoma after low-dose thrombolytic therapy has hitherto not been reported. This case clearly demonstrates that, even in reduced doses, there is high risk for massive hemorrhage due to thrombolytic therapy particularly in elderly female patients.

**REFERENCES**