

Rectus sheath hematoma in patient on Low molecular weight heparin

A. M. Somalwar*, M. S. Vyawahare **, P. B. Sonawane***, B.V. Bhurke****

Abstract

A 55 year old male patient came with complain of chest pain. Patient was known case of systemic hypertension and bronchial asthma. His ECG was suggestive of old anterior and inferior wall myocardial infarction . His CK-MB was raised. He was diagnosed as old MI with fresh NSTEMI. Patient was started on subcutaneous Low Molecular Weight heparin. On 4th day patient developed abdominal swelling and pain from which bleeding started. Local Ultrasonography was suggestive of rectus sheath hematoma. His Low Molecular Weight heparin , aspirin and clopidogrel were withheld. Patient was investigated for bleeding, his platelet count and coagulation profile was normal. Patient was given 2FFP transfusion, bleeding stopped in about 6-8 hours of onset. Low Molecular Weight heparin can be associated with bleeding manifestation, one of which is rectus sheath hematoma.

Key words: Subcutaneous Low molecular weight heparin, Rectus sheath hematoma.

INTRODUCTION

Low molecular weight heparin is considered safer anticoagulant than unfractionated heparin. But bleeding manifestations are reported with Low molecular weight heparin. Hematologic side effects including wound hematoma (11%), anemia (3%), ecchymosis (3%), thrombocytopenia (1.5%), thrombocytosis, hemarthrosis, thrombosis, hypochromic anemia, and retroperitoneal hematoma have been reported. Clinical trials experience included reports of spinal/epidural hematoma and increased risk of hemorrhage. We hereby report a case of rectus sheath hematoma in a patient who was put on subcutaneous Low molecular heparin injection.

CASE REPORT

A 55 year old male patient came to emergency department with complain of chest pain since 4hours. Chest pain was retrosternal, squeezing type, nonradiating associated with sweating. Patient was known case of systemic hypertension with bronchial asthma. Patient did not have any past history of

diabetes mellitus, ischemic heart disease, bleeding or clotting disorder. Patient was non alcoholic and non smoker.

On examination patient was afebrile, Pulse 80/min regular, respiration 20/min, blood pressure 160/100. No pallor, icterus , oedema feet. There was no signs of congestive cardiac failure. Chest was clear and rest systemic examination was normal.

His ECG was showing QS in lead II, III, aVf, V1-V4 suggestive of old inferior and anterior wall myocardial infarction. His CK-MB was 86U/L. Patient was diagnosed as old MI with fresh NSTEMI. He was started on Inj enoxaparin 0.6ml SC BD, T. Aspirin 75mg od, T. clopidogrel 75mg OD, T. sorbitrate 10mg TDS, T. envas 5mg OD, T. atorvas 10mg HS. On 4th day after 7 doses of low molecular weight heparin patient had abdominal swelling and pain at the site of LMWH injection from which bleeding started drop by drop . Swelling was of size 15 +10cm, non tender, soft in consistency. There was no redness or pus discharge from it. Patient did not have fever. His blood pressure and other vitals were stable. There was no bleeding from any other site. His kidney function test was normal.

Local ultrasonography was done which was suggestive of rectus sheath hematoma. His platelet count and

Address for correspondence

* Associate Professor, **Lecturer, Senior Resident***, Senior Resident****
Dept. of medicine, Government Medical college, Nagpur.

coagulation profile was normal. Patient was not affording for Factor X levels, hence Factor X level was not done.

Patient's Low molecular weight heparin and T.aspirin and T.clopidogrel were withheld. Patient was given 2Fresh frozen plasma. His bleeding stopped in 6-8 hours of onset. Gradually his hematoma resolved and then patient was discharged.

DISCUSSION

Reported an overall incidence of major bleeding with low molecular weight heparins of 0.7% to 1.4%. Haemorrhage may occur at any site in the body. Factors associated with an increased risk of bleeding include high doses, advanced age, renal dysfunction⁽¹⁾, and concomitant use of other drugs that affect hemostasis like antiplatelet drugs. Any unexplained decrease in blood pressure and/or hematocrit as well as unexplained symptoms should prompt consideration of a possible hemorrhagic event.

Rectus sheath hematoma is also one of the rare side effect of low molecular weight heparin. Most common presenting complains are abdominal swelling and abdominal pain. Exact pathophysiology of rectus sheath hematoma is not known. Several hypotheses have been suggested, including diffuse small vessel arteriosclerosis, heparin-induced immune microangiopathy, and unrecognized minor trauma⁽²⁾. Computed tomography is definitely superior to ultrasound in the diagnosis of this rare clinical entity⁽³⁾⁽⁴⁾. In the therapy, conservative approach with discontinuation of anticoagulant therapy and fluid replacement is enough in the majority of cases⁽⁵⁾⁽⁴⁾. However, an intervention such as percutaneous arterial embolization and sometimes open surgery might be needed in patients with hemodynamic compromise and continued bleeding⁽²⁾.

Although protamine sulfate can be used as an antidote for LMWH, protamine sulfate incompletely neutralizes the anticoagulant activity of LMWH because it only binds the longer chains of LMWH. Consequently, patients at high risk for bleeding may be more safely treated with continuous IV unfractionated heparin than with SC LMWH.

In the majority of patients, LMWH does not require coagulation monitoring. If monitoring is necessary, like in patients of renal failure and morbid obesity, anti-factor Xa levels must be measured because most LMWH preparations have little effect on the aPTT. Therapeutic anti-factor Xa levels with LMWH range from 0.5–1.2units/mL when measured 3–4 h after drug administration. When LMWH is given in prophylactic doses, peak anti-factor Xa levels of 0.2–0.5 units/mL are desirable.

REFERENCES

- 1) P.J. Denard j. C. Fetterl. R. Zacharski Rectus sheath hematoma complicating low-molecular weight heparin therapy International Journal of Laboratory Hematology, June 2007, 29, (3) 190–194
- 2) Şemsi mustafa aksoy ankara il sağlık müdürlüğü, ankara. Spontaneous hematoma of the rectus sheath associated with low molecular weight heparin, anatol j clin investig 2010;4(1):55-56 Moreno Gallego A
- 3) Aguayo JL, Flores B, Soria T, Hernández Q, Ortiz S, González-Costea R, Parrilla P. Ultrasonography and computed tomography reduce unnecessary surgery in abdominal rectus sheath haematoma. Br J Surg. 1997 Sep;84(9):1295-7. Salemis NS
- 4) Gourgiotis S, Karalis G. Diagnostic evaluation and management of patients with rectus sheath hematoma. A retrospective study. Int J Surg. 2010;8(4):290-3. Epub 2010 Mar 19. Berná JD
- 5) Zuazu I, Madrigal M, García-Medina V, Fernández C, Guirado F. Conservative treatment of large rectus sheath hematoma in patients undergoing anticoagulant therapy, Abdom Imaging. 2000 May-Jun;25(3):230-4.

