Intra-cardiac thrombosis in the setting of heparin-induced thrombocytopenia

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Abstract

HIT is a massive thrombotic storm. The incidence of thrombotic complications is up to 50%, and the mortality rate is up to 20% in untreated cases. The patient's presentation was subtle, with mild thrombocytopenia. The consequences would have been catastrophic if cardioversion was done using the standard guidelines.

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key clinical message is to know that HIT is a massive thrombotic storm. Atrial fibrillation cardioversion might not be safe in HIT using the standard 48-hour cutoff from arrhythmia onset. Also, the case serves as a reminder of how to suspect, diagnose and treat HIT.

56-year-old male had been admitted to the hospital with heart failure exacerbation. He had been on telemetry since admission and had been in sinus rhythm. He had a loop recorder for the last three months with no evidence of atrial fibrillation. He had acute onset atrial fibrillation in the hospital, off-note he had been on enoxaparin for thromboprophylaxis since admission. He complained of calf pain on day 8, and a duplex lower extremities showed right common femoral deep venous thrombosis. Laboratory work is significant for a platelet count drop from 400 on day 4 to 130 on day 8 of hospital stay. The rest of the laboratory work was unremarkable.

Despite the concise duration of atrial fibrillation, we decided against cardioversion without a transoesophageal echo(TEE) as we were suspecting heparin-induced thrombocytopenia(HIT), and we were afraid of thrombotic complications. TEE showed a massive left atrial thrombus, as shown in Figure 1.

His 4T score was eight, which is a high probability, and platelet factor 4 ELISA IgG optical density came back positive at 2.2, which confirms a diagnosis of HIT. He was started on bivalirudin and was later shifted to apixaban for chronic atrial fibrillation anticoagulation.

The **key clinical message** is to know that HIT is a massive thrombotic storm[1]. Atrial fibrillation cardioversion might not be safe in HIT using the standard 48-hour cutoff from arrhythmia onset. Also, the case serves as a reminder of how to suspect, diagnose and treat HIT.

Ethical statement

Patient verbal consent had been obtained to use the material.

References

Arepally GM. Heparin-induced thrombocytopenia. Blood. 2017 May 25;129(21):2864-2872. doi: 10.1182/blood-2016-11-709873. Epub 2017 Apr 17. PMID: 28416511; PMCID: PMC5445568.

Figure legend

Figure 1 is showing a transoesophageal echocardiogram with evidence of huge left atrial thrombus