HEPARIN-INDUCED THROMBOCYTOPENIA
Supporting information

This guideline has been prepared with reference to the following:

Arachchillage DJ, Thachil J, Anderson J et al. Diagnosis and management of heparin-induced thrombocytopenia: Third edition. Br J Haematol. 2023; online ahead of print

https://onlinelibrary.wiley.com/doi/10.1111/bjh.19180

Linkins LA, Dans AL, Moores LK, et al. Treatment and prevention of heparin-induced thrombocytopenia: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. Chest 2012;141:495S-530S

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3278058/

Heparin-induced thrombocytopenia is more common with unfractionated heparin?
A 2017 systematic review of RCTs (three trials involving 1398 participants) found a significant reduction in the risk of heparin-induced thrombocytopenia with low molecular weight heparins compared with unfractionated heparin (risk ratio (RR) 0.23, 95% confidence interval (CI) 0.07 to 0.73) (Junqueira, 2017).
A 2016 review found that risk of thrombocytopenia is 10 times greater for those taking unfractionated heparin (UFH) than those taking low low–molecular weight heparin (LMWH) (Salter et al, 2016).

Junqueira DR, Zorzela LM, Perini E. Unfractionated heparin versus low molecular weight heparins for avoiding heparin-induced thrombocytopenia in postoperative patients. Cochrane Database Syst Rev. 2017 Apr 21;4:CD007557
https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007557.pub3/full

Salter BS, Weiner MM, Trinh MA. Heparin-Induced Thrombocytopenia: A Comprehensive Clinical Review. J Am Coll Cardiol. 2016;67:2519-32

Evidence Level: I

IV infusion of danaparoid sodium influences the clinical outcome?
Danaparoid sodium, along with lepirudin and argatroban, are anticoagulants that substitute for heparin in heparin-induced thrombocytopenia (HIT) (Comunale, 2004).
A retrospective comparison of danaparoid and lepirudin (Farner, 2001) found similar efficacy but a smaller risk of bleeding associated with danaparoid (2.5% of 126 patients vs 10.4% of 175 patients).
In a randomised trial comparing danaparoid and dextran sulphate (Chong, 2001), resolution of thrombosis, on the basis of daily clinical assessment, was considered superior with danaparoid.
An outcomes analysis (treatment period plus 3 months) of 1478 patients (Magnani, 2006) found that 83.8% survived, 63.7% suffered no or minor adverse effects and 20.1% experienced serious but non-fatal adverse events.

Chong BH, Gallus AS, Cade JF, et al. Prospective randomised open-label comparison of danaparoid with dextran 70 in the treatment of heparin-induced thrombocytopenia with thrombosis: a clinical outcome study. Thromb Haemost 2001;86:1170-5

Comunale ME, Van Cott EM. Heparin-induced thrombocytopenia. Int Anesthesiol Clin 2004;42:27-43

Farner B, Eichler P, Kroll H, et al. A comparison of danaparoid and lepirudin in heparin-induced thrombocytopenia. Thromb Haemost 2001;85:950-7

Magnani HN, Gallus A. Heparin-induced thrombocytopenia (HIT). A report of 1478 clinical outcomes of patients treated with danaparoid (Orgaran) from 1982 to mid-2004. Thromb Haemost 2006;95:967-81

Evidence Level: IV

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