

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*. 2024;204:459-75

<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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