

Anesthesiology Rounds
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Heparin-induced thrombocytopenia: A complex clinical and laboratory paradox requiring multidisciplinary management

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Objectives:

This issue of *Anesthesiology Rounds* will allow the reader to:

- know the physiopathogenic basis of heparin-induced thrombosis (HIT)
- understand the high risk of HIT-associated morbidity and mortality
- identify the clinical and laboratory criteria for HIT diagnosis
- propose and institute a switch in antithrombotic treatment for urgent situations

Questions: (*Only one answer is correct*)

1. In an HIT context, thrombocytopenia can develop
 - a. ≥ 5 days of standard heparin administration
 - b. < 2 days in case of previous treatment < 3 months
 - c. ≥ 8 days if the patient is taking low molecular weight heparin (LMWH)
 - d. after a thrombotic event
 - e. all of the above
2. The incidence of HIT is related to
 - a. the route of heparin administration
 - b. the type of heparin received and repeated previous exposures
 - c. the dose of heparin received
 - d. all of the above
3. Compared to unfractionated heparin, HIT events with LMWH
 - a. are one-fifth as frequent
 - b. appear later
 - c. are less thrombogenic
 - d. are less thrombocytopenic

4. HIT diagnosis is certain in the case of
 - a. isolated positive result of an ELISA test
 - b. isolated positive result of a platelet functional test
 - c. combined positive results of both types of test
 - d. there is no certainty in any HIT case

5. If two types of laboratory tests, functional and immunoenzymatic, are negative simultaneously
 - a. this does not rule out the possibility of HIT
 - b. this may be seen in the case of HIT
 - c. repeat testing should be done if there is strong suspicion of HIT
 - d. all of the above

6. Sodium danaparoid
 - a. is of porcine origin
 - b. is of synthetic origin
 - c. is a direct inhibitor of Xa activity
 - d. is a direct inhibitor of IIa activity

7. Laboratory monitoring of a danaparoid treatment is performed by determining
 - a. an increase in aPTT (activated partial thromboplastin time)
 - b. an increase in INR (international normalized ratio)
 - c. anti-IIa activity
 - d. anti-Xa activity and platelet count

8. *In vitro* crossover reactivity with danaparoid is
 - a. always associated with *in vivo* reactivity
 - b. around 0.5%
 - c. more frequent in the case of an HIT with LMWH
 - d. tested if platelet count does not rise after 48-72 hrs

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