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Management of anticoagulation during cardiopulmonary bypass in a patient with allergy to heparin and heparin-like compounds: a case-report.

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Abstract

Hypersensitivity to heparin and heparin-like compounds is a rare condition that represents therapeutic challenges for patients requiring a cardiopulmonary bypass (CPB). We here report the case of a woman with a combined allergy to heparins (fractionated and unfractionated), danaparoid and fondaparinux. She underwent a mitral valve replacement under CBP using lepirudin for systemic anticoagulation. The use of lepirudin instead of unfractionated heparin (UFH) in this setting has many important implications. Lepirudin therapeutic index is narrow and so, overdosing can lead to catastrophic bleeding, whereas underdosing can result in clotting in the CPB tubing. Monitoring of lepirudin activity is essential. The usual activated clotting time monitoring is not a reliable method to monitor anticoagulation with lepirudin in the operating theater. Our experience suggests that the diluted thrombin time provides a valuable alternative during CPB.