Letter to the Editors

On the dosing of lepirudin

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We read with great interest the excellent review by Lee & Ansell on direct thrombin inhibitors recently published in the British Journal of Clinical Pharmacology [1]. We would briefly comment on the reported dosage of lepirudin. Table 1 of the review article displays the official lepirudin dose, as provided by the summary of product characteristics and also indicated in the last edition of the ACCP guideline on parenteral anticoagulants [2], suggesting to administer, in patients with heparin-induced thrombocytopenia (HIT) and thrombosis, a bolus of 0.4 mg kg^{-1} followed by $0.15 \text{ mg kg}^{-1} \text{ h}^{-1}$. Many publications have reported that this dosage may be too high, leading to an increased number of bleeding events [3–5]. The last edition of the ACCP guidelines on HIT states that the initial lepirudin infusion rate should be no higher than $0.10 \text{ mg kg}^{-1} \text{ h}^{-1}$, with dose reductions for patients with impaired renal function [6]. We have provided good quality evidence for this suggestion, indicating that omission of the initial lepirudin bolus and administration of $0.08 \text{ mg kg}^{-1} \text{ h}^{-1}$ in HIT patients with normal renal function (creatinine clearance, $\text{CL}_{\text{cr}} > 60 \text{ ml min}^{-1}$), $0.04 \text{ mg kg}^{-1} \text{ h}^{-1}$ in those with $\text{CL}_{\text{cr}} 30\text{--}60 \text{ ml min}^{-1}$ and $0.01\text{--}0.02 \text{ mg kg}^{-1} \text{ h}^{-1}$ in those with $\text{CL}_{\text{cr}} 15\text{--}30 \text{ ml min}^{-1}$ is efficacious and safe [7]. In our clinical experience this dosing regimen allows an adequate treatment of HIT patients, even those with thromboembolic complications [7]. In accordance with the ACCP guideline on HIT [6], we urge clinicians to administer a lower lepirudin dosage than the official one [7].

Competing Interests

There are no competing interests to declare.

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