

with LMWH (adopting the drug dosage reduction) when compared with untreated thrombocytopenic patients. This approach was utilized by the medical team of the HC service and the reduction of LMWH dosage could be applied without serious events, as was seen in untreated thrombocytopenic patients. Certainly, larger studies are now needed to confirm, and to better clarify, the safety and efficacy of LMWH treatment in thrombocytopenic patients. Meanwhile, existing suggestions and recommendations arising from expert opinion [8] should be applied and tested in each challenging situation.

Disclosure of Conflict of Interests

The authors state that they have no conflict of interests.

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The effects of fasting in Muslim patients taking warfarin: comment

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We read with great interest the article titled, 'The effects of fasting in Muslim patients taking warfarin,' by Lai Y *et al.* [1]. They mentioned that the effect of fasting on warfarin therapy is unknown and that current published literature on this subject is limited to animal models.

Saour *et al.* [2] reported the first study (although not listed in MEDLINE) addressing the effects of fasting on anticoagulation therapy. During a 5-year period, they studied 289 patients who were seen in the anticoagulation clinic at King Faisal Specialist Hospital, Riyadh, Saudi Arabia. Two hundred forty-seven received long-term anticoagulation therapy

because of a cardiac condition, and 42 received it for deep vein thrombosis with or without pulmonary embolism. While on treatment, 106 patients fasted 309 Ramadan months (fasting group) and 183 patients elected not to fast during Ramadan (Non-fasting group).

Thromboembolic events occurred in two (1.88%) and four patients (2.18%) of the fasting and non-fasting groups, respectively. Minor bleeding occurred in 10 (9.43%) and 19 (10.38%) patients, while major bleeding was noted in one (0.94%) and two (1.09%) of the fasting and non-fasting groups, respectively. Warfarin dose during the Ramadan month was 6.5 mg (SD 2.1 mg) and 6.7 mg (SD 2.2 mg), and the anticoagulation effect was at therapeutic range (prothrombin time ratio 1.5–2.5) in 90% and 92% of visits of the fasting and non-fasting groups, respectively.

The authors concluded that Ramadan fasting does not adversely influence the efficacy and safety of long-term oral anticoagulation, nor does it affect the dosage or anticoagulation effect of these drugs [2].

In addition, Chamsi-Pasha *et al.* [3] reported the effects of fasting during Ramadan on 86 patients with heart disease with intention to fast the month of Ramadan at King Fahd Armed Forces Hospital, Jeddah, Saudi Arabia. Detailed clinical and biochemical assessments were performed within 3 days before the start of Ramadan and then on the last day of Ramadan. Seventy-four patients (86%) fasted during the entire Ramadan, nine patients (10.4%) missed the fasting for up to 7 days, and

three patients (3.5%) could not fast. In the group of patients receiving warfarin (12 patients), no significant changes occurred in the prothrombin time ($P = 0.4$), although statistically significant changes were observed in partial thromboplastin time ($P = 0.04$). No thromboembolic or hemorrhagic complications related to anticoagulation were observed, probably due to a very small number of patients receiving warfarin [3].

Although Lai *et al.* found a statistically significant increase in mean international normalized ratio of 0.23 ($P = 0.006$) during Ramadan, this did not seem to have significant clinical implication because the international normalized ratio has a wide therapeutic range and the authors reported no thrombotic or bleeding events during the study period. [1]

Disclosure of Conflict of Interest

The authors state that they have no conflicts of interest.

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The effects of fasting in Muslim patients taking warfarin: reply

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We thank Dr Skaik and his colleagues for their interest in our study [1,2] and sharing the works of Chamsi-Pasha *et al.* [3] and Saour *et al.* [4]. The former was an observational study that looked at general biochemical changes in cardiac patients who fasted. Out of the 86 patients analyzed from 3 days before the start of Ramadan through to the end of it, only 12 patients were taking warfarin. As rightly indicated by Dr Skaik and colleagues, the effects of fasting on anticoagulation could not be deduced because of the limited size of this subgroup and fundamental design of the study, which was not intended