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Reply: Beta blocker withdrawal post-MI – the missed dimension of patient symptoms

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We sincerely thank Dr Ahmed B. Shamsulddin for his interest[1] in the results of the REBOOT-CNIC trial[2], especially in our article reporting the short-term safety of beta blocker withholding or withdrawal in post-myocardial infarction (MI) patients[3]. As he correctly points out, our findings published in EuroIntervention demonstrate that non-prescription or abrupt withdrawal of beta blockers in patients at discharge after a myocardial infarction does not result in an increased risk of major adverse events[3]. This was primarily reflected in our composite ischaemic endpoint, which captures events potentially linked to ischaemic risk, both in the short term (3 months) and across the study's entire follow-up. Our results indicate that abrupt discontinuation of beta blockers is safe, even at the time of hospital discharge following acute myocardial infarction.

These findings have important clinical implications, as many patients are treated with beta blockers solely because of a prior myocardial infarction, without any other indication for their use. In patients with preserved left ventricular ejection fraction (LVEF), beta blockers can be safely withdrawn immediately without added ischaemic risk.

Dr Shamsulddin also raises the question of other possible consequences of abrupt beta blocker withdrawal, focusing on palpitations or shortness of breath, which may be common in post-infarction patients. As described in the REBOOT protocol, we collected information on quality of life and functional status using EQ-5D, the 5-item International Index of Erectile Function (in men only), and the Patient Health Questionnaire-2 in a subcohort of approximately 2,000 patients at hospital discharge (baseline) and at 15 months[2]. None of these instruments specifically measures palpitations.

The REDUCE-AMI trial, conducted in post-MI patients with preserved LVEF (≥50%), reported results consistent with those of REBOOT, showing no reduction in the primary endpoint (death or recurrent MI) with beta blocker use[4]. Importantly, a secondary publication from REDUCE-AMI addressed the impact of beta blocker withdrawal versus continuation on quality of life, using the EQ-5D and World Health Organisation-Five Well-Being Index (WHO-5) questionnaires. The EQ-5D questionnaire is widely validated to assess health-related quality of life across five domains – mobility, self-care, usual activities, pain/discomfort, and anxiety/depression – with an additional EuroQol visual analogue scale rating global health from 0 (worst imaginable) to 100 (best imaginable). The WHO-5 questionnaire is a validated tool to assess subjective psychological well-being. In REDUCE-AMI, no significant differences were observed between patients randomised to beta blockers versus no beta blockers, suggesting that quality of life is not impaired in post-MI patients treated according to current standards who discontinue beta blockers[5]. In a different publication from the same trial population, the effect of beta blocker therapy on anxiety and depression scales at the same timepoints showed that beta blocker treatment, as compared to control, led to a modest increase in depressive symptoms[6].

Although no validated questionnaire exists to specifically capture palpitations or ectopic beats, the overall evidence from hard clinical endpoints, together with the patient-reported outcomes from REDUCE-AMI, strongly suggest that abrupt beta blocker withdrawal in post-MI patients with preserved LVEF is not associated with increased ischaemic risk or impaired quality of life.

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Conflict of interest statement

The authors have no conflicts of interest to declare.

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