Why carry out this study?

- Both beta-blockers and ivabradine have been shown to improve coronary flow velocity reserve (CFVR), an important prognostic marker in patients with coronary artery disease (CAD), but there are still no data comparing their effects.
- The aim of this study was to compare the effect of bisoprolol and ivabradine on CFVR in patients with stable CAD, and to better understand the differences between them.

What was learned from this study?

- CFVR significantly increased in both ivabradine and bisoprolol groups, but to a greater extent in patients treated with ivabradine, despite a similar lowering of the heart rate (HR).
- This study shows for the first time in humans that ivabradine significantly improves CFVR to a greater extent than a beta-blocker, in patients with stable CAD.
- The similar HR reduction obtained with both drugs implies that the effect of ivabradine goes beyond the HR, and differences between ivabradine and bisoprolol could be due to a different effect on diastolic perfusion time and isovolumic ventricular relaxation, as well as unmasking of alfa-adrenergic coronary vasoconstriction by beta-blockers.

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