Reply from the authors

Editor—We would like to thank Dr Guarracino and Dr Tritapepe for their interest in and criticism on our article addressing the use of preoperative levosimendan in combined aortic valve and coronary bypass surgery.1 Currently, levosimendan is indicated for i.v. use in hospitalized patients with acutely decompensated heart failure (ADHF). The mechanism of action and current literature suggest that the therapeutic potential of levosimendan may not be limited only to ADHF patients. We are happy to share the interest in studying levosimendan in new clinical settings with Dr Guarracino and Dr Tritapepe.

Our inclusion criteria were left ventricular (LV) ejection fraction <50% or LV hypertrophy, as indicated by a wall thickness of >12 mm. All our study patients met at least one of these criteria. It is possible that by including study patients with lower ejection fractions, we would probably have obtained even better results.

The fact that the patients suffering severe aortic valve stenosis should not receive vasodilators has been questioned earlier. Many studies have shown a positive effect of vasodilators in this patient group. Nitroprusside has been shown to be a safe and effective treatment in patients with decompensated heart failure due to severe LV systolic dysfunction and severe aortic stenosis.2 We agree that vasodilatation is a potential risk in this patient group, which is why the patients were closely monitored in a cardiac high-dependency setting (including invasive arterial pressure monitoring) during the study drug infusion. The control group received placebo as a preoperative treatment, but during and after the operation, haemodynamics were treated according to the local protocol in both study groups.

This study was underpowered to detect mortality differences between the groups. One patient in the levosimendan group died on the first postoperative morning. The death was not related to the levosimendan infusion.

It is a common practice also in our institution to use perioperative levosimendan in patients with severely depressed LV function. In this study, we wanted to test the hypothesis that the levosimendan metabolite OR-1896 production is better when levosimendan is infused before operation. After the results of this study, we have increased the use of perioperative levosimendan in patients with severely depressed LV function. Levosimendan has been shown to be effective in cardiac surgery patients. Owing to the high costs, future studies are warranted to elucidate the optimal timing and dosing of levosimendan. In our study, we showed that cardiac index (CI) and stroke volume index (SVI) were higher in the levosimendan group for the 4 day postoperative period (P<0.05). The concentrations of OR-1896 were higher compared with earlier studies using perioperative dosing.3 We fully agree that caution and cost-effective application should be advocated when levosimendan is used in high-risk patients undergoing cardiac surgery.

Conflict of interest

None declared.

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Systemic air embolism during lung biopsy

Editor—Percutaneous biopsy guided by computed tomographic (CT) scan is commonly used for the diagnosis of pulmonary lesions.1 The occurrence of a systemic air embolism is a rare but potentially lethal complication.2

A 57-yr-old man was admitted in our hospital for the investigation of three pulmonary lesions recently found on a chest CT scan. He had a rectal cancer 3 yr previously treated with radiotherapy, neoadjuvant chemotherapy, and an anterior resection. No comorbidity was to be noted.

The patient was undergoing a left lung biopsy. The patient was placed prone and a coaxial biopsy system with a core biopsy needle was used. After local anaesthesia, the percutaneous biopsy was performed with CT scan-fluoroscopic guidance at the left lower lobe of the lung by an experienced radiologist. During the procedure, the patient suddenly presented with haemoptysis, cough, and acute chest pain. Clinical examination retrieved hypotension (systolic arterial pressure <60 mm Hg) and a severe bradycardia (<50 beats min⁻¹).

The procedure was immediately stopped. The patient was placed in the Trendelenburg position. He received i.v. saline solution and high-concentration oxygen by a facemask. The ECG showed significant elevation of ST segment at the posterior (II, III, aVF) and anterior (V₁, V₂, V₃) leads. An immediate chest CT scan showed localized parenchymal