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REPLY

Reply to: "Systolic dysfunction and mortality in critically ill patients: more data are needed to believe in this association!"

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We thank Dr Sanfilippo and co-workers for their comments on our recently published article, "Regional left ventricular systolic dysfunction associated with critical illness: incidence and effect on outcome".[1] Herein, we address their concerns and clarify a few potential misunderstandings.

Sanfilippo *et al*. argue that one should be cautious to link left ventricular systolic dysfunction (LVSD) to worse prognosis among critically ill patients based on the results in our study. They base this on the fact that LVSD assessed by the left ventricular ejection fraction (LVEF) is challenging to interpret in the critically ill and has not been associated with an increased risk of mortality in previous meta-analyses. We do agree with this and our study did, in fact, not show a significant association between global LVSD, or low LVEF, and mortality and thus is consistent with previous studies. The novelty in our data lies in that the presence of regional hypokinesia, that was not attributable to obstructive coronary artery disease, was associated with increased mortality. Left ventricular regional hypokinesia in critically ill patients with normal coronary arteries has been observed in several retrospective studies from our group,[2–4] and the present study verifies these findings.

We essentially agree with Sanfilippo *et al*. on their other points as well. The data on diastolic dysfunction would have been informative, but the absence of this does not invalidate the findings related to regional systolic function. We are currently evaluating diastolic data in this cohort and hope to present these data soon. We also agree that it would be good if independent groups attempted to validate our data and acknowledge the value of unifying reporting guidelines such as PRICES.[5] Unfortunately, the PRICES document was published after this study had been conducted, but we do, however, plan to adhere to the PRICES recommendations in subsequent studies.

Lastly, we need to emphasize that our study included a broader population of intensive care unit patients than most other studies on cardiac dysfunction in critically ill patients. During the last decade, the majority of studies have been focused solely on patients with sepsis or septic shock. Although sepsis is an important syndrome, this strategy limits the clinical usefulness and generalizability of the results of these studies as they cannot be directly extrapolated to other patients with critical illness. In fact, only 30% of the patients in our study were admitted with sepsis or septic shock. We think it is important for the critical care society to see beyond the scope of sepsis and evaluate the impact of cardiac dysfunction in our entire patient population.

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