Letter to the Editor

Levosimendan and Quality of Life

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We read with great interest the article by Papadopoulou et al[1] concerning the effect of intermittent levosimendan infusion on the quality of life of 20 patients with symptomatic heart failure (New York Heart Association, NYHA class III-IV), as assessed using three different current questionnaires. The authors noted a statistically significant improvement in these patients' quality of life, accompanied by an equivalent improvement in ejection fraction after the administration of the last (sixth) dose of levosimendan.

Intravenous infusion of levosimendan is used today –at least in Europe– for the treatment of patients with decompensation of chronic heart failure, while it is now also indicated in acute heart failure, according to the latest guidelines of the European Society of Cardiology (class IIb, B).[2] However, the use of levosimendan has not been approved in the USA, especially since the controversial findings of the SURVIVE trial.[3] Although one-time administration of levosimendan appears to be cost-effective,[4] the same does not hold for its intermittent administration, which in any case continues to be controversial.

Regarding the study by Papadopoulou et al,[1] apart from the small patient sample –from which it is difficult to draw certain conclusions about the real beneficial effect of levosimendan on quality of life– we noticed an apparent conflict in the data concerning the study population. While 60% of the patients were reported to belong to NYHA class IV, strangely almost all of them were taking beta blockers (100%) and angiotensin converting enzyme inhibitors (95%), a situation that in our opinion is unlikely to be encountered in everyday clinical practice. We believe that the most likely explanation is that most of them in fact belonged to an improved class (II or III), since such patients are in any case considered to benefit more from the use of levosimendan.

In addition, the small improvement in ejection fraction seen on re-examination, with a very small standard deviation in the measurements for such a small population, is hard to accept as objective. Finally, we believe that the observed improvement in both quality of life and ejection fraction would be better attributed, not to the intermittent administration of levosimendan, but rather to the better monitoring of the patients and the modification of the standard treatment they were receiving, given that the patients in this study were checked according to the protocol at least once per month.

To conclude, we fully concur with the authors' conclusions that the evaluation of quality of life in patients with heart failure is of particular importance for their correct treatment and follow up, and that the use of relevant questionnaires should become a part of normal clinical practice.

References

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The authors reply

We are most grateful to our colleagues Papadopoulos et al for their constructive comments and we are glad our paper elicited such a response. As we reported in our original paper, our findings were from a small population and were just initial observations, which need to be confirmed by more systematic studies before they can be generally accepted.

We would also like to stress that all our patients were indeed in stages III and IV heart failure and were under full treatment with beta-blockers and angiotensin-converting enzyme inhibitors; this was achieved by careful titration of the doses. In addition, a percentage of those who improved subsequently showed deterioration of symptoms when the monthly levosimendan administration was discontinued, despite their close clinical and laboratory monitoring during this period. Our detailed findings from the discontinuation of intermittent levosimendan administration will be included in another study that is currently in progress.

In general, we found that intermittent administration of the drug helped improve the quality of life of end-stage heart failure patients and allowed us to carry out other therapeutic interventions, e.g. improvement of mitral regurgitation via percutaneous annulus implantation, biventricular pacing, and post-transplantation monitoring. It was also considered to be preferable medication by patients who wished to avoid a permanent catheter for the administration of intravenous inotropes.

It should, however, be noted that there are already studies of the intermittent administration of levosimendan, and if the early findings are confirmed by double-blind studies this will allow us to draw definite conclusions about the precise indications for its use.

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