SUMMARY AND CONCLUSIONS

This study evaluated the response, safety, efficacy, clinical applicability and benefit of enhanced external counterpulsation for treatment of patients with ischemic left ventricular dysfunction (EF < 40%) not eligible for surgical or percutaneous revascularization.

Throughout the world, EECP therapy has been studied for various potential uses other than heart disease. The 2002 American College of Cardiology/American Heart Association (ACC/AHA) guidelines on the management of patients with chronic stable angina recommended EECP as a Class IIb (Level of Evidence:B) intervention for treatment of RAP, among other nonpharmacological approaches such as neurostimulation and transmyocardial laser revascularization. A focused 2007 update does not alter that recommendation. The European Society of Cardiology views EECP therapy as an interesting modality available for treatment of RAP with more clinical trials needed to define its role in treating RAP.

In this study, EECP had no effects on the patients’ heart rate, systolic blood pressure and diastolic blood pressure post-EECP and 6 months later in comparison with pre-EECP.

Regarding the NYHA class and the Canadian cardiovascular Society (CCS) Functional Class, there was highly significant improvement in both classes post-EECP.

There was highly significant improvement in the grade of diastolic dysfunction post-EECP although systolic function did not change.

Regarding the left ventricular end diastolic diameter, the left ventricular end systolic diameter and the SWMA, there was no significance difference in the diameter post-EECP in comparing with pre-EECP.

On the other hand, on evaluating Pro BNP level in the study group, there was significant decrease in its level post-EECP sessions and at 6 months follow. On analysis of the previous data regarding the ejection fraction and Pro-BNP and the relation between them, it was found that there is a significant relation between them. As there was improvement in the ejection fraction of 12 patients representing 29.3% of the total number on the patients. 11 (26.8%) of them had shown improvement in the Pro-BNP.

On the other hand, there was no improvement in the ejection fraction of 29 patients representing 70.7% of the total number of patients. 16 (39%) of them had shown improvement in the Pro-BNP, while the remaining 13 (31.7%) had show no improvement.