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## Authors reply

Dear Editor,

First of all, we thank the writers for their interest in our article. According to our results, percutaneous closure of an atrial septal defect (ASD) had multiple beneficial effects on the cardiac anatomy and physiology. A decrease in the size of the right chamber of the heart appeared as early as the first day after the procedure. However, the left side of the heart may be exposed to hemodynamic stress, depending on volume overload after the ASD closure, and left ventricle (LV) volume was found to have increased. The levels of N terminal B-type natriuretic peptide (NT-pro BNP) increased within the first day and were still elevated 30 days after the procedure, which is associated with increased LV diameters and volumes. As we know, the primary stimulus for NT-pro BNP release appears to be LV wall stretching in response to volume and pressure overload.<sup>[1]</sup> NT-pro BNP levels are more dependent on the left heart than the right heart.<sup>[2]</sup>

Functional measures of the right ventricle, such as tricuspid annular plane systolic excursion (TAPSE) values and basal systolic tissue Doppler velocity, have been generally reported to decrease significantly within 24 hours of closure and to continue to decline over the succeeding 6 to 8 weeks.<sup>[3]</sup> Previous studies have demonstrated that the TAPSE value decreased and the myocardial performance index of the RV increased following percutaneous closure of an ASD. It has been proposed that it was a result of the sudden

decrease in the right heart volume load and pressure.<sup>[3,4]</sup> Our results were comparable to these data.

As we noted among the limitations of the study, our follow-up period was relatively short and therefore, it is not possible to predict the long-term effects of percutaneous closure of an ASD. Nonetheless, it may be reasonable to envisage normalization of the cardiac structure, functions, and NT-pro BNP level with longer follow-up periods.

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