Ability of the Tricuspid Annular Peak Systolic Velocity (S') to Detect Systolic Right Ventricular Impairment After Congenital Heart Defect Surgery in Pediatric Patients

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To the Editor,

We read with interest the article, Tissue Doppler Imaging Detects Impaired Biventricular Performance Shortly After Congenital Heart Defect Surgery, from Klitsie et al. [1]. In our opinion, this is an excellent manuscript describing impaired systolic and diastolic biventricular performance shortly after congenital heart defect (CHD) surgery.

The authors clearly state that only tissue Doppler parameters such as the tricuspid annular peak systolic velocity (S') and the M-mode parameter tricuspid annular plane systolic excursion (TAPSE) were able to detect impairment of systolic right ventricular (RV) function [1].

We completely agree with their findings and may add that in our opinion, this impairment can persist up to 1 year postoperatively. We note also that after surgery for tetralogy of Fallot, these parameters worsen continuously over time in pediatric and adolescent patients [2, 3].

The authors state that a need exists for a detailed evaluation of the RV function parameters (e.g., the S' in this pediatric population) [1]. They found that S' was significantly lower in the surgically treated CHD patient group than in the control group.

For the convenience of the pediatric cardiology audience, we add that our group recently has published normal

S' values with z-scores for healthy pediatric patients [4]. Given these available normal values, authors can compare the measured S' values with respective age-related normal z-score values.

The remarkable study from Klitsie et al. [1] clearly supports the notion that the RV is highly susceptible to postoperative function impairment in pediatric patients. As pediatricians, we thank the authors for addressing the need for careful and systematic evaluation of the RV in pediatric patients before and after CHD correction and look forward to more interesting studies from this group.

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