patients with TOF ($p < 0.05$ for all), these parameters further decreased at 1 week after operation, and increased to preoperative level at 3 months and 6 months after operation, and but lower than those of controls. While ϵ of interventricular septum for all segments were significantly reduced in preoperative patients, and did not decrease further at 1 week after operation, and increased to normal level at 3 months and 6 months after operation.

2. In comparison with controls, RV GLSRs and SRs of RV free wall for basal, mid and apical segments were significantly reduced in preoperative patients with TOF ($p < 0.05$ for all), these parameters did not decrease further at 1 week after operation, and increased to normal level at 3 months and 6 months after operation. SRs of interventricular septum for all segments did not decrease in preoperative patients with TOF; these indices increased at 1 week after operation, followed by toward normal level at 3 months and 6 months after operation.
3. RV GLS and GLSRs were correlated inversely with the diameter of RV, QRS duration and age, and positively with tricuspid valvular annular peak systolic velocity (S_m). RV GLS and GLSRs had no correlation with the type of surgery. Age was the independent predictor of RV global strain and strain rate ($\beta_1 = -0.212$, $P_1 = 0.012$; $\beta_2 = -0.180$, $P_2 = 0.033$).

Conclusions RV regional and global function in patients with TOF can be improved after operation. The difference in RV free wall and interventricular septum postoperative recovery and RV transient changes after operation can be subtly analysed by ultrasound two-dimensional speckle tracking imaging. The surgery approach has no influence on early postoperative RV function. Course of disease inversely impacts on postoperative RV function.

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EFFECT OF SURGICAL CORRECTION OF TETRALOGY OF FALLOT ON SHORT-TERM RIGHT VENTRICULAR FUNCTION AS DETERMINED BY ULTRASOUND TWO-DIMENSIONAL SPECKLE TRACKING IMAGING

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Yuman Li, Mingxing Xie. *Department of Ultrasonography, Union Hospital of Tongji Medical College, Huazhong University of Science and Technology, Hubei Provincial Key Laboratory of Molecular Imaging, Wuhan 430022, China*

Objectives The impact of surgical repair on short-term right ventricular (RV) function in patients with tetralogy of Fallot (TOF) is scarce. The purpose of our study is to assess RV regional and global function in patients with TOF before and after operation by ultrasound two-dimensional speckle tracking imaging

Methods 36 patients with TOF before, 1 week after, 3 months after, and 6 months after operation were studied. RV longitudinal peak systolic strain (ϵ), strain rate (SRs) in RV free wall and interventricular septum for basal, mid and apical segments were measured by ultrasound two-dimensional speckle tracking imaging. RV global longitudinal peak systolic strain (GLS) and strain rate (GLSRs) were also determined.

Results

1. Compared with controls, RV GLS and ϵ of RV free wall for basal, mid and apical segments were significantly reduced in preoperative