with control subjects ($p < 0.05$ for both). Optimal cut-off value for torsion was 9° with sensitivity 72% and specificity 76%.

Conclusions Torsion, longitudinal and radial strain measured by 2-D STI method can provide useful information to differentiate CP and RCM. Torsion of 9° can differentiate CP and RCM with sensitivity of 72% and specificity 76%.

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DIFFERENTIATION OF CONSTRICTIVE PERICARDITIS AND RESTRICTIVE CARDIOMYOPATHY BY TWO-DIMENSIONAL SPECKLE TRACKING IMAGING METHOD

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Objective To compare the longitudinal, radial, circumferential, rotational and torsional mechanics of the left ventricle (LV) in patients with constrictive pericarditis (CP) and restrictive cardiomyopathy (RCM), and detect the new quantitative parameters to differentiate CP and RCM using two-dimensional speckle tracking imaging (2-D STI) method.

Methods 18 patients with CP and 14 patients with RCM were enrolled. Nineteen control subjects were recruited. Two-dimensional imagings of parasternal short-axis (apical, mid, and basal segments) and apical 4-chamber, 3-chamber, 2-chamber views were recorded. Longitudinal, radial, circumferential, rotational and torsional parameters were analysed.

Results In systole phase, radial strain was significantly lower in RCM than in CP (apex: $14 \pm 7\%$ vs $23 \pm 12\%$, $p < 0.05$; mid: $16 \pm 7\%$ vs $32 \pm 14\%$, $p < 0.05$; base: $13 \pm 11\%$ vs $20 \pm 8\%$, $p < 0.05$) and was reduced in both groups when compared with control subjects ($p < 0.05$ for both). Longitudinal strain was significantly lower in RCM than in CP (apex: $-12 \pm 4\%$ versus $-17 \pm 6\%$, $p < 0.05$; mid: $-8 \pm 3\%$ versus $-16 \pm 4\%$, $p < 0.05$; base: $-6 \pm 3\%$ versus $-16 \pm 5\%$, $p < 0.05$) and was also reduced in the two groups when compared with control subjects. Circumferential strain was reduced both in CP and RCM when compared with control subjects ($p < 0.05$), but no significant difference was found between the two groups. In the LV apex, rotation was significantly reduced in CP compared with RCM and control subjects ($4 \pm 3^\circ$ versus $7 \pm 3^\circ$, $4 \pm 3^\circ$ versus $9 \pm 3^\circ$, $p < 0.05$ for both). Torsion was significantly lower in CP than in RCM ($7 \pm 4^\circ$ vs $12 \pm 5^\circ$, $p < 0.05$) and was reduced in the two groups when compared