Objectives To explore the clinical value of tricuspid annular displacement measured by tissue motion annular displacement (TMAD) technique in patients with atrial septal defect (ASD).

Methods Thirty-six patients with ASD were enrolled as patient group and twenty-three normal individuals were enrolled as controlled group. The inner diameter of main pulmonary artery (MPA), right atrium (RA), right ventricular (RV) and right ventricular ejection fraction (RVEF) were measured by two-dimensional echocardiography. The TAD of the two groups at right ventricular free wall, septum and the mid-point (recorded as T1, T2, Tm) were measured by TMAD technique and compared.

Results The T1, Tm of the patient group were lower than that of the controlled group ((19.1±4.8) mm vs (22.4±3.0) mm, (15.6 ±3.7) mm vs (19.0±2.2) mm, respectively, p<0.05). The T2 had no significant difference between the two groups.

Conclusions T1 and Tm of the patients were lower significantly than the normal individuals, so TMAD technique may be used to evaluate the right ventricular systolic function in patients with ASD.