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Tricuspid annular motion.

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Abstract

Triscupid annular motion is related to right ventricular systolic function in the same way mitral annulus motion is related to left ventricular function. Tricuspid annular excursion reflects the longitudinal motion of the right ventricle, and the systolic descent of the anulus correlates with systolic venous inflow to the right atrium. However, it has not been shown clearly how to reproducibly quantify this motion. Therefore we describe a method to measure triscuspid annular motion using two-dimensional oriented M-mode echocardiography from the apical view. We studied a group of 10 normal subjects (mean age, 28.7 years; range, 25 to 38 years) and a group of 29 patients (mean age, 57.2 years; range, 20 to 84 years) with disease of the left side of the heart but no evidence of involvement of the right side of the heart. In each subject, tricuspid and mitral annular motion were measured respectively at their lateral, septal or medial, anterior, and posterior margin points. The total tricuspid annular motion for normal subjects was, as follows: lateral, 24.9 +/- 3.5 mm; medial, 20.1 +/- 2.5 mm; anterior, 21.6 +/- 3.8 mm; and posterior, 22.3 +/- 2.3 mm. Interobserver and intraobserver variability was low, with a coefficient of variance for the different annular points ranging from 6.19% to 11.56% between observers and from 4.10% to 7.26% within observer. We conclude that it is possible to measure tricuspid annular motion with this method in a reproducible way and to use it as a diagnostic tool in evaluating function of the right side of the heart.

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