

# 3D TEE imaging in a patient with severe tricuspid regurgitation with dextrocardia and tricuspid commussural prolapse

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## Abstract

Dextrocardia is a cardiac positional anomaly in which the heart is located in right hemithorax with base-to-apex axis directed to the right and caudad. A number of congenital heart defects have been reported with dextrocardia, including VSD, PDA, ASD, TOF, pentology of Fallot, infundibular PS, transposition and pseudotruncus and total anomalous pulmonary venous return. We will share a patient with severe TR due to tricuspid valve commissural prolapse. A 42-year-old female patient was admitted to our clinic with the complaint of dyspnea. Transthoracic echocardiography revealed dextrocardia and severe TR consisting of two separate regurgitation jets. Contrast echocardiography performed due to dilatation of the coronary sinus, did not show persistent left superior vena cava, and no right-to-left shunt was observed. Transesophageal echocardiography showed a prolapse in the commissure where the tricuspid anterior and septal leaflets meet, and a severe eccentric regurgitation jet with an area of vena contracta 0.75cm<sup>2</sup> in the 3D MPR was observed. A moderate regurgitation jet was also seen from the coaptation line of all three leaflets. Commissural prolapse and regurgitation jet revealed in detail by 3D imaging. No significant pathology was detected in the other valves except mild insufficiency. Right heart catheterization and tricuspid valve surgery were planned for the patient with normal right heart functions. Although it is known that there are many congenital pathologies accompanying dextrocardia, we are happy to share our experience with you as the first case to report the coexistence of primary tricuspid valve disease and commusural prolapse with 3D detailed imaging.

## 3D TEE imaging in a patient with severe tricuspid regurgitation with dextrocardia and tricuspid commissural prolapse

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Dextrocardia is a cardiac positional anomaly in which the heart is located in the right hemithorax with its base-to-apex axis directed to the right and caudad. A number of congenital heart defects have been reported with dextrocardia, including ventricular septal defect, patent ductus arteriosus, atrial septal defect, tetralogy of Fallot, pentalogy of Fallot, infundubular pulmonary stenosis, transposition and pseudotruncus and total anomalous pulmonary venous return. We will share a patient with severe tricuspid regurgitation due to tricuspid valve commissural prolapse.

A 42-year-old female patient was admitted to our clinic with the complaint of dyspnea. Transthoracic echocardiography revealed dextrocardia and severe tricuspid regurgitation consisting of two separate regurgitation jets. Contrast echocardiography performed due to dilatation of the coronary sinus, did not show persistent left superior vena cava, and no right-to-left shunt was observed. Transesophageal echocardiography showed a prolapse in the commissure where the tricuspid anterior and septal leaflets meet, and a severe eccentric regurgitation jet with an area of vena contracta  $0.75\text{cm}^2$  in the 3D MPR was observed. A moderate regurgitation jet was also seen from the coaptation line of all three leaflets. Commusural prolapse and regurgitation jet revealed in detail by 3D imaging. No significant pathology was detected in the other valves except mild insufficiency. Right heart catheterization and tricuspid valve surgery were planned for the patient with normal right heart functions.

Although it is known that there are many congenital pathologies accompanying dextrocardia, we are happy to share our experience with you as the first case to report the coexistence of primary tricuspid valve disease and commusural prolapse with 3D detailed imaging.



