Images in cardio-thoracic surgery

Three-dimensional demonstration of tetracuspid aortic valve by 16-row multidetector-row computed tomography: comparison with transesophageal echocardiography

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A 31-year-old-male with a history of congestive heart failure was referred for severe aortic regurgitation due to a tetracuspid valve diagnosed by transesophageal echocardiography (Fig. 1). A CT scan using 16-row multidetector CT was performed preoperatively.

Three-dimensional CT imaging demonstrated a tetracuspid aortic valve clearly (Fig. 2).

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Fig. 1. Supraannular view of transesophageal echocardiography using a 5 MHz transducer shows the entire image of the tetracuspid aortic valve with four different cusps. It also depicts the small gap at the center of the aortic valve.

Fig. 2. Supraannular view of three-dimensional volume rendering image using a 16-row multidetector computed tomography shows the entire image of the tetracuspid aortic valve. It also depicts the four different cusps and thickened commissures more clearly than transesophageal echocardiography.

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