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**Photo Quiz** 

# Impingement of the Occluder on Tricuspid Valve

## Zahra khajali, MD<sup>1</sup>; Marzieh Khayatzadeh, MD<sup>1,\*</sup>

<sup>1</sup>Rajaei Cardiovascular, Medical and Research Center, Iran University of Medical Science, Tehran, IR Iran

\*Corresponding author: Marzieh Khayatzadeh, MD, Fellowship of Echocardiography, Echocardiography Department, Rajaei Cardiovascular, Medical and Research Center, Iran University of Medical Science, Tehran, IR Iran. Tel: +98-9121894993, E-mail: marzi\_khayat@yahoo.com

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#### 1. Introduction

A 16 year-old-boy with history of recent transcatheter ventricular septal defect (VSD) device closure referred to the adult congenital heart disease clinic for annual follow up. He had no symptom. Transthorasic echocardiography revealed LV and RV enlargement and moderate tricuspid regurgitation. What is the diagnosis in transthoracic four-chamber and subcostal view?

#### 2. Answer

Transthoracic echocardiography views showing entrapped septal tricuspid leaflet in VSD occlude device as one of the transcatheter VSD device closure complication.

### 3. Comment

The most common adverse events after VSD device clo-

sure is conduction anomalies (15%) (1, 2). Tricuspid regurgitation is a major consideration in transcatheter closure of VSD (< 2%). The impingement of the occluder on the valve leaflets by interfering with chordae tendineae may cause instant tricuspid regurgitation. Consequently echocardiography and angiography are crucial for confirming the correct deployment of the device (2).

#### References

- 1. Liu J, Wang Z, Gao L, Tan H, Zheng Q, Zhang M. A Large Institutional Study on Outcomes and Complications after Transcatheter closure of a Perimembranous-type ventricular septal defect in 890 cases. *Acta Cardiol Sin*. 2013;29:271–9.
- Holzer R, Balzer D, Cao QL, Lock K, Hijazi ZM, Amplatzer Muscular Ventricular Septal Defect I. Device closure of muscular ventricular septal defects using the Amplatzer muscular ventricular septal defect occluder: immediate and mid-term results of a U.S. registry. J Am Coll Cardiol. 2004;43(7):1257-63.

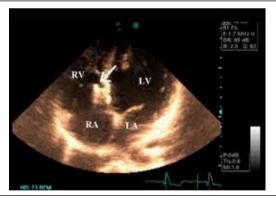


Figure 1. Transthoracic Four-chamber View

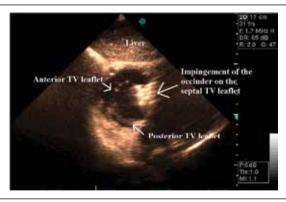


Figure 2. Transthoracic Subcostal View