

## Quadricuspid aortic valve: a rare congenital heart anomaly

■ Denis Mačkić\*,  
■ Edin Begić,  
■ Faruk Čustović,  
■ Salko Isaković

General Hospital "Prim.dr.  
Abdulah Nakaš", Sarajevo,  
Bosnia and Herzegovina

**KEYWORDS:** aortic valve, congenital heart defect, aortic regurgitation, echocardiography, treatment.

**CITATION:** *Cardiol Croat.* 2022;17(9-10):238. | <https://doi.org/10.15836/ccar2022.238>

**\*ADDRESS FOR CORRESPONDENCE:** Denis Mačkić, General Hospital "Prim.dr. Abdulah Nakaš", Kranjčevićeva 12, 71000 Sarajevo, Bosnia and Herzegovina. / Phone: +387 33 285-100 / E-mail: [denismackic@hotmail.com](mailto:denismackic@hotmail.com)

**ORCID:** Denis Mačkić, <https://orcid.org/0000-0001-6540-4944> • Edin Begić, <https://orcid.org/0000-0001-6842-262X>  
Faruk Čustović, <https://orcid.org/0000-0001-7254-8858> • Salko Isaković, <https://orcid.org/0000-0002-9272-0747>

**Aim:** To present accidental detection of quadricuspid aortic valve (QAV), a rare congenital heart anomaly with an incidence of 0.01–0.04%.

**Case presentation:** 49-years-old patient came for an examination due to tachycardia and palpitations during physical exertion. Transthoracic echocardiography verified the regular dimensions of the left and right heart cavities, with preserved systolic function of the left ventricle, and mild mitral and tricuspid regurgitation. The existence of QAV was suspected, while moderate aortic regurgitation was verified (pressure half-time 390 ms, vena contracta 5 mm, jet covered 40% left ventricular outflow tract, regurgitant volume 35 mL, regurgitant fraction 36%, effective regurgitant orifice area 0.16 cm<sup>2</sup>). Transesophageal echocardiography confirmed the diagnosis of QAV (**Figure 1**).

**Conclusion:** In QAV, diagnosis, as well as monitoring of aortic regurgitation, are of essential importance because of timely surgical treatment<sup>1,2</sup>.



FIGURE 1. A quadricuspid aortic valve with moderate aortic regurgitation.

RECEIVED:  
October 12, 2022

ACCEPTED:  
November 10, 2022



### LITERATURE

1. Saith S, Saith S, Murthy A. Quadricuspid Aortic Valve: An Introduction for Clinicians. *Cardiol Res.* 2022 Feb;13(1):2-10. <https://doi.org/10.14740/cr1308>
2. Piracha UG, Kowlgi GN, Paulsen W, Mojadidi MK, Patel N. Quadricuspid aortic valve: a case report and review of literature. *Future Cardiol.* 2021 Aug;17(5):833-840. <https://doi.org/10.2217/fca-2020-0135>