

How Does Persistent Left Superior Vena Cava Affect Human Heart Health?

Ercan Akşit,¹ Sonay Oğuz,² Halil Fatih Aşgün,² Emine Gazi,¹ Bahadır Kırılmaz¹ and Özge Turgay Yıldırım³

We have read the article by Chao et al. with great interest. Persistent left superior vena cava (PLSVC), an important congenital anomaly that increases coronary venous pressure because of increased coronary venous volume, was found to have a prevalence of 0.29 % as in the literature.¹ It is known that increased hyperpigmentation and lesions such as ulcers in the skin develop many years after the onset of increased venous pressure in the lower extremity.² Although there are various pathological conditions that dilate coronary veins such as PLSVC³ and the concept called “varicose vein of the heart” has been reported in the literature,⁴ whether this chronic pressure burden on the coronary veins in humans disturbs the myocardium or has an adverse effect on its systolic and diastolic functions is yet to be demonstrated. Chronic coronary venous insufficiency is a phenomenon that has recently been experimentally described, and it shows that myocardium tissue is damaged as a result of the heart veins being exposed to ch-

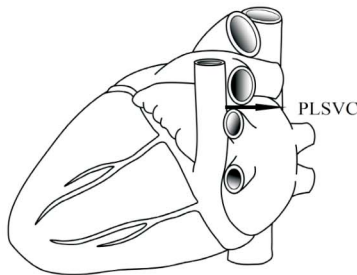
ronic pressure burden⁵ (Figure 1). In their study where they compared the echocardiographic results of two neonatal groups with and without PLSVC, Chao et al. reported that there was not significant difference between the two groups and that all members of the group with PLSVC were asymptomatic.¹

In conclusion, because the clinical consequences of increased venous pressure occur after many years,² following up and comparing this isolated group of 48 PLSVC neonatal cases with their peers from the normal population using cardiac imaging methods may provide knowledge on whether PLSVC causes myocardial damage and, if so, how many years require to occur this.

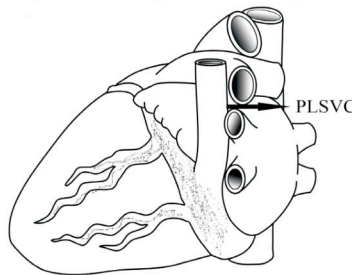
CONFLICT OF INTEREST

There are no conflicts of interest to declare.

A: Pre-clinical condition: the stage where dilatation in coronary veins has not started yet.



B: Varicose vein of the heart: the stage where there is obvious dilatation in coronary veins but myocardial damage has not started yet.



C: Chronic coronary venous insufficiency: the stage where myocardial damage has occurred due to prolonged increase in coronary vein pressure.

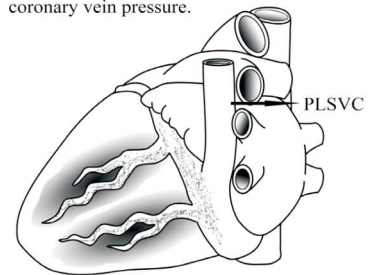


Figure 1. The stages that patients with persistent left superior vena cava (PLSVC) may go through due to expanded coronary veins and increased coronary veins pressure.

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¹Department of Cardiology; ²Department of Cardiovascular Surgery, Canakkale Onsekiz Mart University Faculty of Medicine, Canakkale; ³Department of Cardiology, Eskişehir City Hospital, Eskişehir, Turkey.

Corresponding author: Dr. Ercan Akşit, Department of Cardiology, Onsekiz Mart University Faculty of Medicine, Barbaros Street Terzioğlu Campus B Block No: 4, Canakkale, Turkey. Tel: +90 286 263 59 50; Fax: +90 286 263 59 56; E-mail: ercanaksit@comu.edu.tr

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