Ageneza desne gornje šuplje vene uz perzistirajuću lijevu gornju šuplju venu

Concomitant persistent left superior vena cava and agenesis of right superior vena cava

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UVOD: Perzistirajuća lijeva gornja šuplja vena (PLGŠV) je rijetka, ali značajna urođena kongenitalna vaskularna anomalija. Rezultat je embrionalnog poremećaja zatvaranja lijeve gornje kardinalne vene kaudalnije od brahiocefalične vene. Najčešće se otkrije slučajno, a može biti udružena i s drugim kardiovaskularnim poremećajima kao što je atrijski septalni defekt, bikuspidni aortni zalistak, koarktacija aorte, atrezija otvora koronarnog sinusa te cor triatriatum. PLGŠV najčešće postoji uz desnu gornju šuplju venu (DGŠV), dok je rijetko povezan s nepostojanjem DGŠV, rijetkom anatomskom anomalijom incidencije 0,07-0,13%.

BACKGROUND: Persistent left superior vena cava (PLSVC) is rare, but important congenital vascular anomaly. It results when the left superior cardinal vein caudal to the innominate vein fails to regress. It is most commonly observed by chance but can be associated with other cardiovascular abnormalities including atrial septal defect, bicuspid aortic valve, coarctation of aorta, coronary sinus ostial atresia, and cor triatriatum. PLSVC is generally co-existent with right superior vena cava (RSVC) but rarely associated with absent RSVC. The absence of RSCV is a rare anomaly with an incidence of 0.07-0.13%.

FIGURE 1.

Transthoracic echocardiogram in parasternal long-axis view illustrating a dilated coronary sinus (Ao: aorta; CS: coronary sinus; LA: left atrium; LV: left ventricle).

PRIKAZ SLUČAJA: Bolesnica stara 75 godina bila je upućena na kardiološku evaluaciju zbog fibrilacije atrijske. Do tada nije imala simptome kardiovaskularne bolesti. Fizikalni pregled je bio uredan osim nalaza fibrilacije atrijske. Na transtorakalnoj ehokardiografiji nalaz strukture bez odjeka u atrioventrikularnom žlijebu upućivao je na uvećani koronarni sinus. Urađena je i dodatna slikovna obrada: kardijalnom magnetnom rezonancijom (MR) utvrdi-

CASE PRESENTATION: A 75-year-old woman was referred for cardiac evaluation because of atrial fibrillation. She did not have any symptom or a history of cardiovascular disease. Physical examination was unremarkable except for the presence of atrial fibrillation. On transthoracic echocardiography an echo-free structure in the posterior atrio-ventricular groove suggested a dilated coronary sinus. We performed a magnetic resonance im-

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lo se postojanje PLGŠV, koja prolazi uz lijevi stranu medijastinuma i utiče u desni atrij putem izrazito proširenog koronarnog sinusa, a sve bez postojanja DGŠV. Ovaj nalaz je potvrđen MR venografijom, kao i višeslojnim kompjutoriziranim tomogramima venskog sustava. Pretragama nisu bile utvrđene dodatne kardijalne abnormalnosti.

ZAKLJUČAK: Kada je izolirana abnormalnost, PLGŠV se obično ne prepoznaje do trenutka potrebe lijevog gornjeg pristupa srcu i tada postaje značajan anatomski nalaz. Može komplicirati kardiorakalne kirurške procedure te pozicioniranje centralnog venskog katetera ili srčanih elektroda. Također, osobito ako nije prisutna DGŠV, uvećan i rastegnut koronarni sinus može biti uzrok srčanim aritmijama. Ehokardiografski nalaz proširenog koronarnog sinusa trebao bi uvijek pobuđivati sumnju na postojanje PLGŠV dok dodatne suvremene slikovne metode omogućuju preciznu dijagnozu ove anomalije.

aging (MRI) and a multislice computed tomography (MSCT) evaluation. Cardiac MRI revealed a PLSVC which descended on the left side of the mediastinum and drained into the right atrium via a markedly dilated coronary sinus. The RSVC was absent. These findings were confirmed by MRI and MSCT venography. The patient had no additional cardiac abnormality.

CONCLUSION: When isolated, the PLSVC is usually not recognized until left superior approach to the heart is required, when it becomes a relevant anatomic finding. It can complicate cardiothoracic surgery and the positioning of central vein catheter or cardiac leads. Also, in PLSVC with absent RSCV, a large and stretched coronary sinus can cause cardiac dysrhythmia. A dilated coronary sinus on echocardiography should always raise the suspicion of PLSVC. Modern imaging techniques including MSCT and MRI provide precise diagnosis of this anomaly.

LITERATURE

1. Biffi M, Boriani G, Frabetti L, Bronzetti G, Branzi A. Left superior vena cava persistence in patients undergoing pacemaker or cardioverter-defibrillator implantation: a 10-year experience. *Chest*. 2001;120:139-44.
2. Nsah EN, Moore GW, Hutchins GM. Pathogenesis of persistent left superior vena cava with a coronary sinus connection. *Pediatr Pathol*. 1991;11:261-9.
3. MacDonald ST, Emmanuel Y, Myerson S et al. Absent right superior vena cava: multimodality imaging of upper venous drainage via left-sided superior vena cava and azygos venous system. *Circ Cardiovasc Imaging*. 2009;2:234-6.