

Perzistentni foramen ovale – dvije strane iste medalje Patent foramen ovale – two sides of the same medal

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Prikaz slučajeva: Prikazujemo dva slučaja bolesnica s perzistentnim foramenom ovale. Prvi slučaj je 46-godišnja žena s negativnom anamnezom na kardiovaskularne bolesti. Nakon četvrte trudnoće verificirana joj je progresija desnostrane safeno-femorale insuficijencije te je indiciran operativni zahvat. Dana 14. rujna 2017. godine učinjena je ekstirpacija vene saphene magne (VSM). Prvi postoperativni dan nastala je desnostrana hemiplegija, a hitnim MSCT-om mozga verificirana je okluzija na razini lijeve arterije cerebri mediae (ACM). Učinjena je trombektomija akutne okluzije lijeve ACM kojom se postigla potpuna rekanalizacija lijeve ACM. Sljedeći dan dijagnosticirana je masivna plućna embolija. Ehokardiografski smo verificirali perzistentni foramen ovale (PFO) te zaključili kako je isti pokretač nepovoljnih događaja. Drugi je slučaj 46-godišnja bolesnica čija je obiteljska anamneza pozitivna na kardiovaskularne bolesti. Unatrag nekoliko godina u 24-satnom holteru EKG su se verificirali paroksizmi supraventrikularne tahikardije. Zbog bolova u desnom gležnju, a u izostanku traume, učinjen je Doppler arterija nogu kojim se našla okludirana desna arterija dorsalis pedis (ADP). Anamnestički se doznaje kako pacijentica učestalo nosi visoke potpetice i uske čizme zbog čega je stopalo u plantarnoj ekstenziji. Učinjena je opsežna obrada, imunološka obrada je bila uredna, a ehokardiografski je verificiran PFO. S obzirom kako nismo Dopplerom mogli jasno razlučiti radi li se o okludiranoj aneurizmi, intramuralnom hematomu ili perifernoj embolizaciji, učinjena je dodatna obrada. CT angiografijom stopala verificirana je okludirana ADP desno koja je dobro kolateralizirana te 70% stenoza ADP lijevo. Radilo se o obojstranoj aneurizmi ADP zbog plantarne ekstenzije odnosno "Sandal strap" traume i ateroskleroze.

Zaključak: Iako je PFO češći uzrok perifernih embolizacija što smo i prikazali u prvom slučaju^{1,2}, ovdje smo htjeli naglasiti kako treba misliti i na aneurizme perifernih arterija, posebno kod žena koje učestalo nose visoke potpetice te im je stopalo u plantarnoj ekstenziji što uzrokuje ponavljajuće dugotrajne trauma niskog intenziteta, ali koje mogu dovesti do aneurizmatičke degeneracije sa sekundarnim aterosklerotičkim promjenama.

Case report: We are presenting two clinical cases of patients with patent foramen ovale (PFO). The first case is 46-years-old woman with a negative history of cardiovascular disease. After the fourth pregnancy, a progression of the right-sided saphenofemoral insufficiency was verified and an operative procedure was indicated. On September 14, 2017 the VSM was extirpated. On the first postoperative day a right-sided hemiplegia emerged and the brain MSCT confirmed the occlusion at the level of the left ACM. A thrombectomy of the acute occlusion of the left ACM was performed, which resulted in complete recanalization of the left ACM. The next day, a massive pulmonary embolism was diagnosed. We verified the PFO by echocardiography and concluded that the PFO was trigger of these adverse events. The second case is 46-years-old woman whose family history is positive for cardiovascular disease. For several years, 24-hours ECG has verified paroxysms of supraventricular tachycardia. Because of the pain in the right ankle and in the absence of trauma, Doppler echo showed us occluded right ADP. From the medical history it was known that woman often wears high heels and tight boots, which makes foot positioned in the plantar extension. An extensive treatment was performed, the immunological treatment was neat and the echocardiography verified PFO. Considering that we could have not clearly distinguish Doppler echo from the occluded aneurysms, intramural hematoma or peripheral embolization, additional treatment was done. CT angiography of the foot verified an occluded ADP on the right which was well collateralized and the 70% stenosis of the left ADP. It was a both sided aneurysm of ADP due to plantar extension, precisely "Sandal strap" trauma and atherosclerosis.

Conclusion: Although the PFO is more common cause of peripheral embolization^{1,2}, as we have shown in the first case, here we wanted to emphasize the need of accurate diagnosis of the aneurysms on the peripheral arteries, especially in women who frequently wear high heels and put their feet in the plantar extension, causing repeated long duration of low intensity traumas which can lead to aneurysmal degeneration with secondary atherosclerotic changes.

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LITERATURE

1. Ali Kausar Rushdi Y, Hina H, Patel B, Cross FW. The incidence of peripheral arterial embolism in association with a patent foramen ovale (right-to-left shunt). *JRSM Short Rep.* 2011 May;2(5):35. <https://doi.org/10.1258/shorts.2011.0100742>
2. Sonntag M, Hopper N, Graham AR. "Sandal strap" trauma and atherosclerosis are dual pathologies leading to bilateral true aneurysms of the dorsalis pedis arteries. *J Vasc Surg.* 2013 May;57(5):1391-4. <https://doi.org/10.1016/j.jvs.2012.09.066>