

Percutaneous and surgical interventions

Extended Abstract

Patent foramen ovale-management challenges: a case series

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Background: Patent foramen ovale (PFO) is an anatomical interatrial communication with potential for right-to-left shunt. It is detected in 10-15% of the population by transthoracic echocardiography (TTE) and up to 27% by autopsy. Most patients with isolated PFO are asymptomatic. Patients may have a history of stroke or transient ischemic event of undefined etiology.^{1,2} The recurrence rate of stroke or TIA has been reported to be as high as 3.4-3.9% per year. In patients with atrial septal aneurysm and PFO, the risk of first recurrent stroke within 2 years has been reported to be as high as 9%, whereas the rate of subsequent stroke or TIA recurrence within 2 years increases to 22%. No consensus exists on treatment of PFO in patients with transient ischemic attack (TIA) or stroke. Traditional treatment has been antiplatelet therapy alone in low-risk patients or combined with warfarin in high-risk individuals to prevent cryptogenic stroke.^{3,4}

Case report: We represent three cases of PFO diagnosed in our hospital within past 14 months. *Case 1:* 34-year-old man hospitalized at the Neurology Department due to transient loss of consciousness. Echocardiography showed interatrial septal aneurysm, and two septal defects – subaortal, 11mm in

diameter with left-to-right shunt and second one, 3mm in diameter. There was also visible smaller thrombotic mass in left auricle. Patient underwent surgical closure. *Case 2:* 39-year-old woman presented at the routine echocardiographic examination after she was discharged from Neurology department where she was treated for stroke. Her brain MRI showed multiple ischemic infarctions with no focal deficit on neurological examination. TTE showed small PFO, 3mm in diameter with right-to-left shunt (**Figure 1**, **Figure 2**). Patient received percutaneous surgical closure. *Case 3:* 63-year-old man presented to the internist after loss of consciousness. ECG showed atrial fibrillation and TTE was subsequently performed. It showed atrial

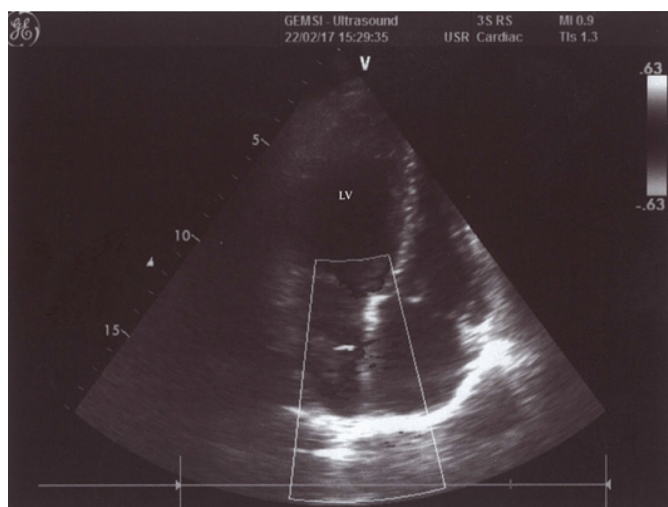


FIGURE 1. Patent foramen ovale.

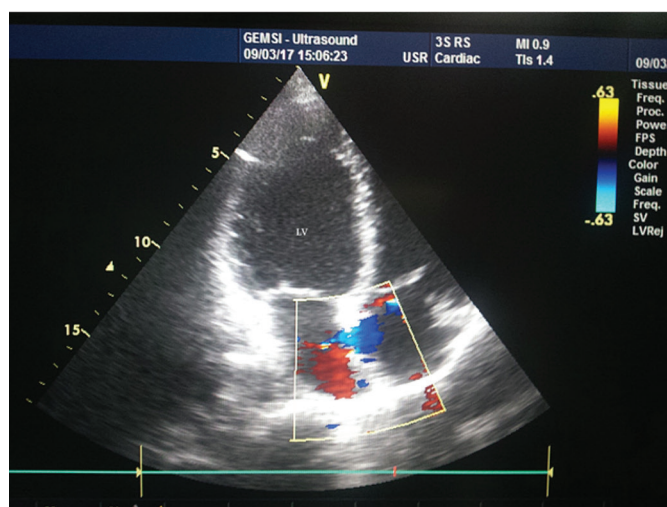


FIGURE 2. Patent foramen ovale with right-to-left shunt.

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septal aneurysm, a septal defect, 14mm in diameter with left-to-right shunt (Figure 3, Figure 4). The patient is on the waiting list for surgical treatment.

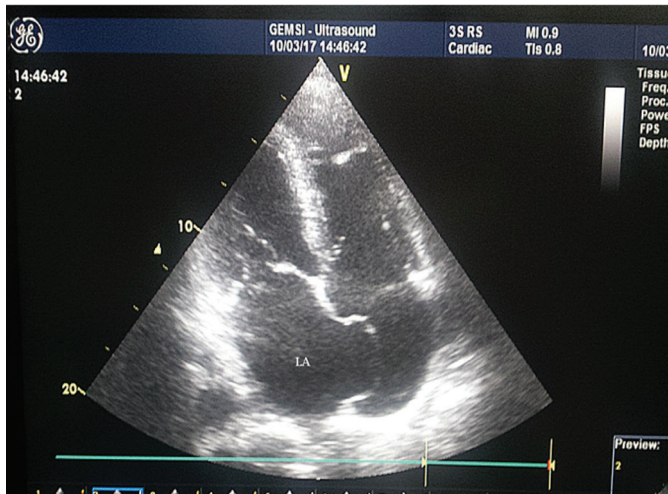


FIGURE 3. Atrial septal aneurysm.



FIGURE 4. Atrial septal defect with left-to-right shunt.

Conclusion: Surgical closure PFO has resulted in elimination of residual shunt across the PFO. Advantages include the following: permanent closure of the defect, prevents future paradoxical emboli, no long-term anticoagulation and its risks.

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