A hole in the heart: the link between patent foramen ovale and stroke

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Abstract

Introduction: In about 40% of younger patients with acute ischaemic stroke, the cause remains undefined despite an extensive diagnostic evaluation. Patent foramen ovale (PFO) is a hemodynamically insignificant interatrial communication present in about 25% of the adult population. Large PFO with a substantial shunt has been identified in many studies as an anatomical comorbidity associated with stroke.

Case report: We describe a case of a 49-year-old man who presented to the emergency department with left hemiplegia, left-sided neglect, and aphasia. Cranial computed tomography showed an acute left partial anterior circulation ischaemic stroke. Duplex ultrasound of the carotid arteries did not identify atherosclerotic lesions or reduced blood flow velocities. The patient had been healthy until this event, and his only apparent risk factor for vascular disease was smoking of approximately 15 cigarettes/day. Transoesophageal echocardiography was performed a week later and revealed a thromboembolus straddling a PFO. The patient was informed as to the options of treatment, and he decided to use long-term oral anticoagulation.

Conclusion: This case deals with a stroke cause that can be documented and treated both as primary and secondary prevention. The choices of antiplatelet agents, oral anticoagulants, transcatheter placement of an occlusive device or cardiac surgery present a broad range of options which entail different risks.

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