

Efficacy and safety of percutaneous patent foramen ovale closure in patients with a hypercoagulable disorder

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Background: Transcatheter closure of patent foramen ovale (PFO) in patients with cryptogenic stroke reduce the rate of recurrent events. Although presence of thrombophilia increases the risk for paradoxical emboli through a PFO, such patients were excluded from the large randomized studies.

Purpose: To examine the effect of hypercoagulable state on clinical outcomes after PFO closure.

Methods: We retrospectively analyzed data of 800 consecutive patients undergoing percutaneous PFO closure at the Massachusetts general hospital. We compared the safety and efficacy of the procedure in patients with and without a hypercoagulable state. Periprocedural treatment included 3 months of anticoagulation followed by low dose aspirin.

Results: A hypercoagulable disorder was found in 239 patients (29.9%).

There were no significant differences in baseline demographics, echocardiographic characteristics, procedural success rate, or complication rate between both groups. At median follow-up of 41.9 months there were no differences in the rate of stroke/transient ischemic attack (2.5% in non-hypercoagulable group vs. 3.4% in hypercoagulable group, log-rank test $p=0.349$). Survival analysis of composite outcome that included: ischemic neurologic event, reintervention and procedural or neurologic death did not show significant difference between groups (Log-rank $p=0.122$).

Conclusion: Percutaneous PFO closure is a safe and effective therapeutic approach for patients with cryptogenic stroke and an underlying hypercoagulable state