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Cryptogenic transient ischaemic attack and stroke recurrence in patients referred for patent foramen ovale assessment

Hutchinson G. (1), Smith L.A. (2), Nyagodzi M. (1), Salmon A.P. (2), Bharucha T. (2)
University of Southampton, Southampton, UK (1); Department of Congenital Cardiology, University Hospital Southampton, Southampton, UK (2)

Introduction: Patent foramen ovale (PFO) is associated with cryptogenic stroke (CS). Due to a lack of definitive data, the case for percutaneous PFO closure for the secondary prevention of stroke versus medical therapy alone remains controversial. This study therefore aims to determine the benefits of percutaneous PFO device closure in preventing the recurrence of stroke and TIA.

Methods: Patients who were referred to our PFO clinic following cryptogenic stroke or transient ischaemic attack (TIA) were divided into 2 groups: those that had their PFO closed (closure group) and those that did not have a PFO closure (non closure group), which included patients who did not have a PFO and patients with a PFO who did not proceed to closure. Data was collected from our institution's electronic patient records system as well as by patient questionnaire. Information regarding patient demographics, clinical characteristics and outcomes were recorded. The study end point was a recurrence of stroke and/or TIA during follow up. Data were analysed using chi squared test, or Fisher's exact test where appropriate.

Results: A total of 291 patients was analysed. The closure group contained 199 patients and the non closure group 92 with mean (±SD) follow up times of 4.0 ± 3.2 years and 2.9 ± 2.4 years, respectively. There was a significant difference between the rates of stroke and/or TIA recurrence in these two groups, with 8 events in the closure group versus 10 events in the non closure group (4.0% compared to 12.7% respectively, P=0.01).

Conclusion: PFO closure is superior to non closure in reducing recurrence of stroke or TIA in at risk individuals. Further research, specifically additional randomised controlled trials, are required in this field.