A 70-year-old woman with a history of repeated cerebrovascular events and patent foramen ovale (PFO) closure with PREMERE occluder (St Jude Medical, St Paul, MN, USA) had a recurrence of transient left hemiparesis. Transesophageal echocardiography (TOE) revealed an intracardiac mass on the left side of the PFO closure system (8 × 8 mm) (Panel A). Despite oral anticoagulation, TOE performed 2 months later found persistent mass (Panel B). Surgical removal of the PFO occluder with the linked mass (Panel C, arrow) and the closure of the atrial communication were, therefore, performed. Histology concluded to a granulomatous formation. Exogenous structures (Panel D) that may come from the occluder were found in the tissue and participated to an inflammatory reaction associated with fibrosis. To our knowledge, this is the first report of a granulomatous mass which needed removal of a PFO occluder. Beyond its debated indication, this highlights that the PFO closure may have rare but still unknown and not negligible complications.