Patent Foramen Ovale and the risk of CVA or periferal embolism

Jan-Eize Lindeboom, cardioloog. St Elisabeth Hospital en Curacao Medical Center

Commissie lid NVVC voor schrijven leidraad PFO closure

Geen belangenverstrengelingen.

Editorial, NEJM 2013

Still No Closure on the Question of PFO Closure

- Steven R. Messé, M.D.,
- and David M. Kent, M.D.

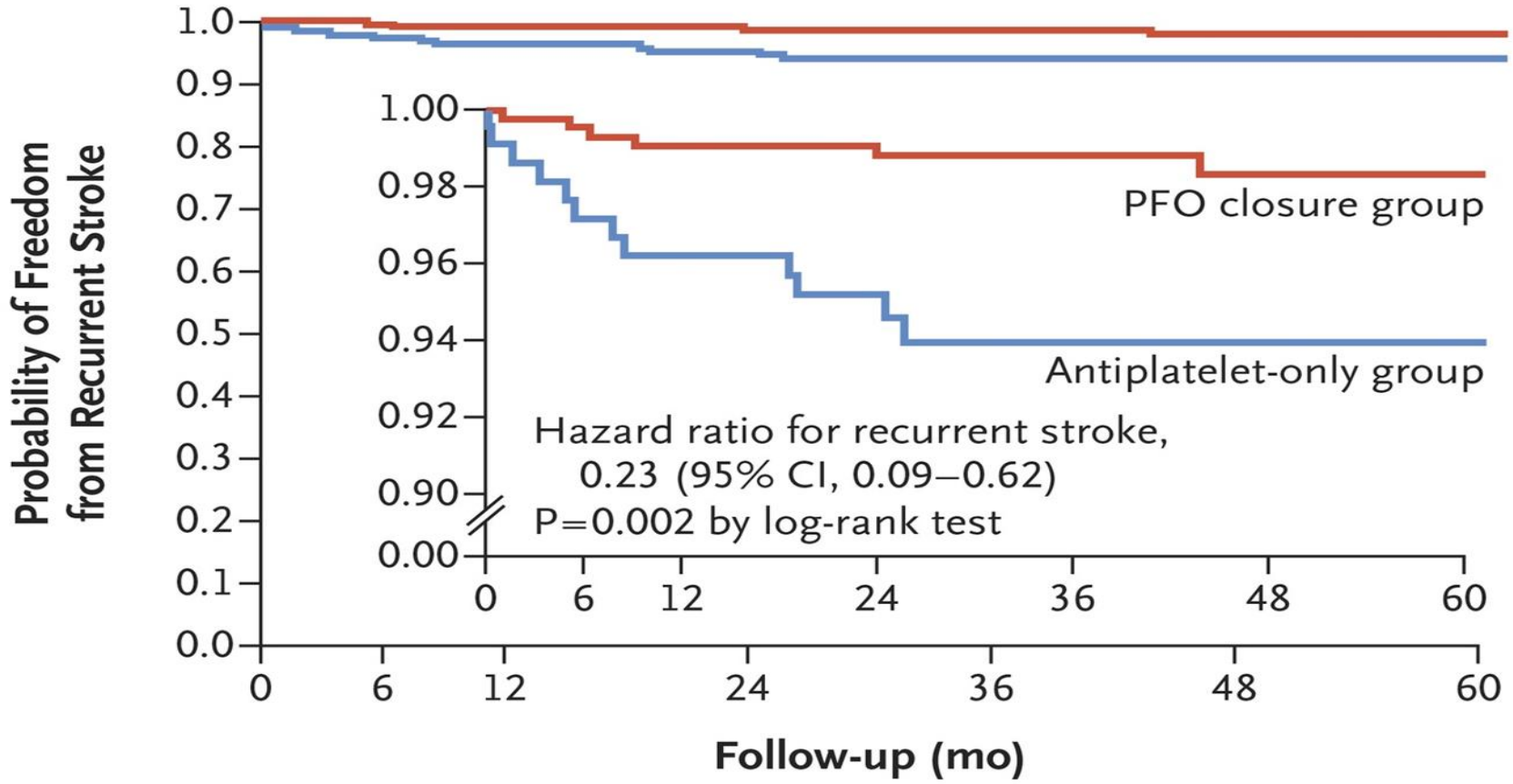
In approximately 30% of young survivors of stroke, no clear cause is identified despite a thorough evaluation. Patent foramen ovale is found on transesophageal echocardiography in about half of these patients, as compared with approximately 25% of the general population. Clinicians, then, often assume that the patent foramen ovale was the cause of the stroke, although it may be incidental in some patients. The most effective strategy for the prevention of stroke recurrence in such patients is uncertain, and some experts recommend closure of the patent foramen ovale to prevent future embolic events, although high-level data have been lacking.

Original Article, NJEM sept 2017

Patent Foramen Ovale Closure or Antiplatelet Therapy for Cryptogenic Stroke

Lars Søndergaard, M.D.,Scott E. Kasner, M.D.,et al. Gore REDUCE Clinical Study Investigators

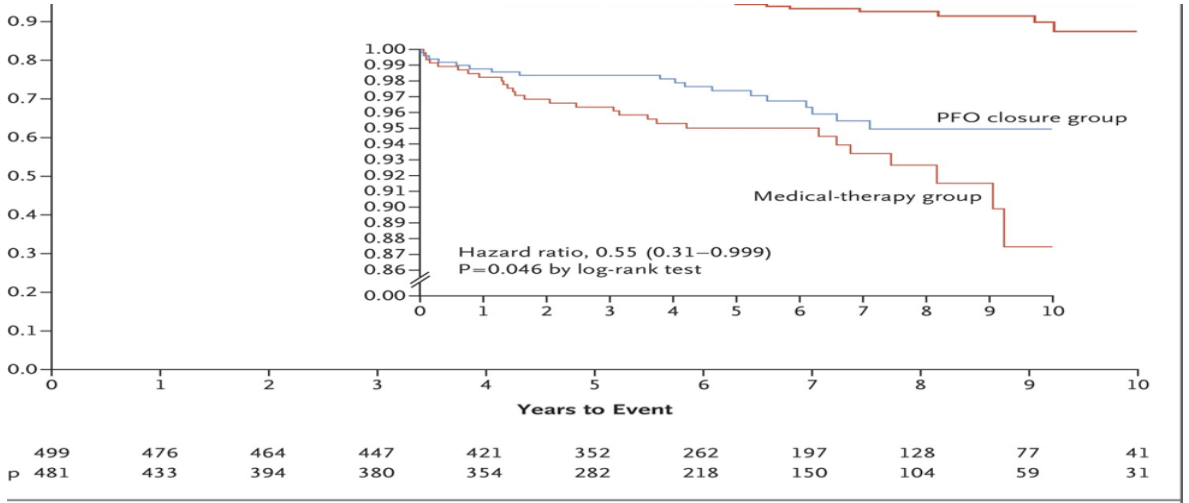
In this trial involving patients with cryptogenic ischemic stroke, the risk of recurrent stroke, including clinical ischemic stroke and a composite of clinical and silent brain infarctions, was significantly lower with PFO closure plus antiplatelet therapy than with antiplatelet therapy alone. The number of patients who needed to be treated to prevent one stroke in 24 months was approximately 28 patients.

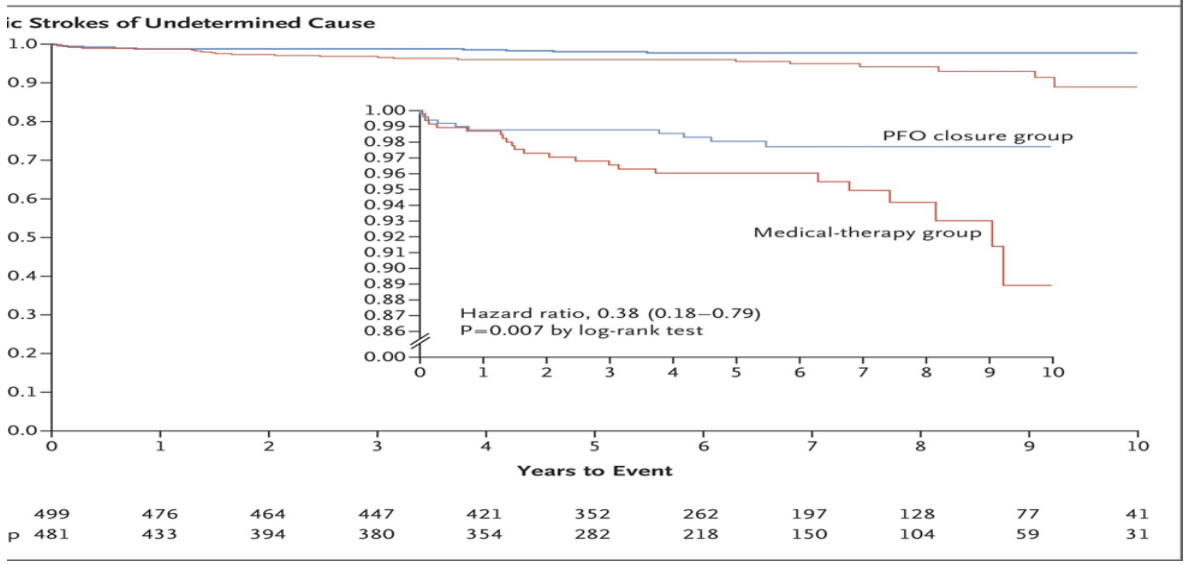


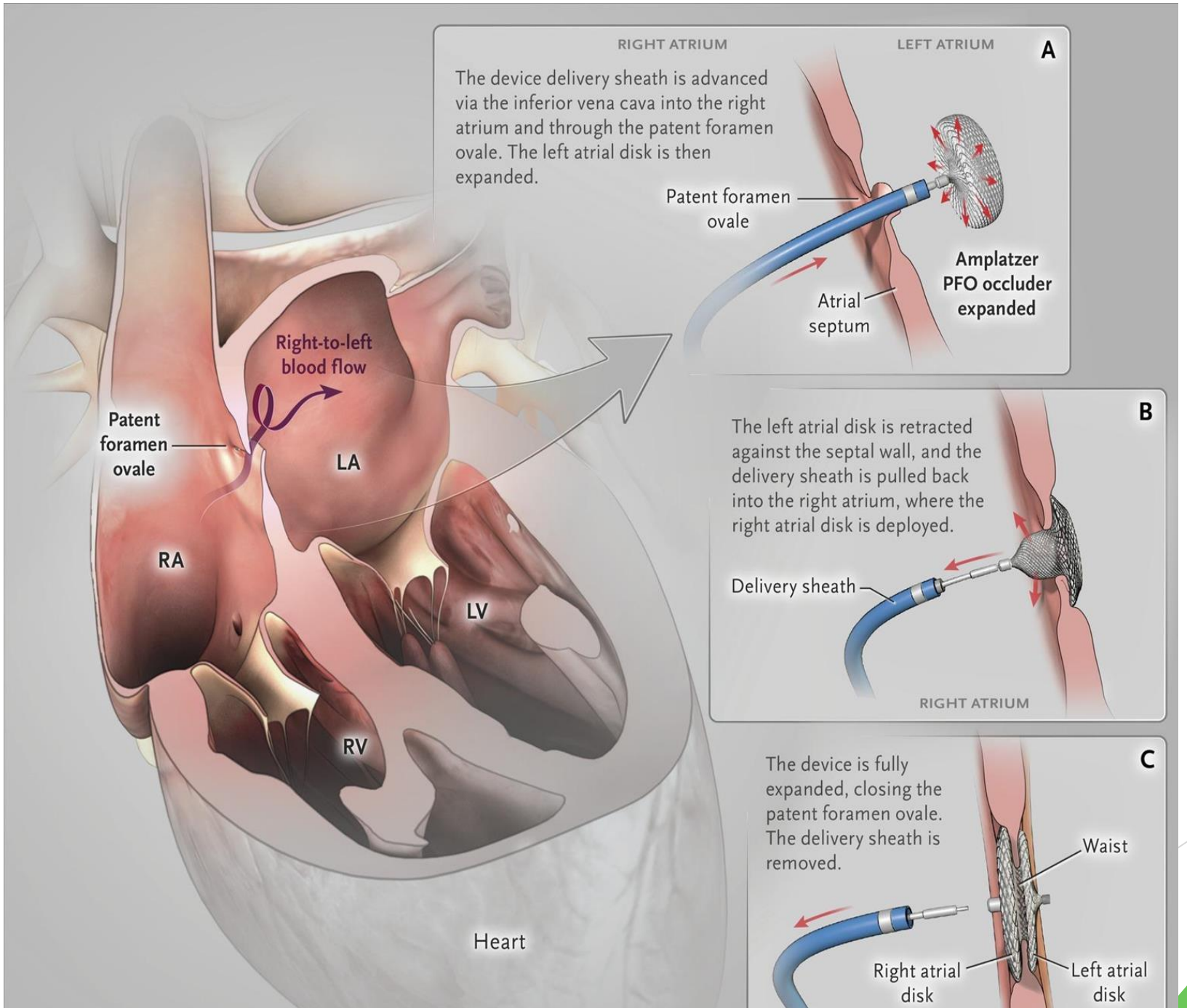
No. at Risk							
PFO closure group	441	422	417	398	278	182	102
Antiplatelet-only group	223	202	194	173	116	78	30

Long-Term Outcomes of Patent Foramen Ovale Closure or Medical Therapy after Stroke

Jeffrey L. Saver,John D. Carroll,et al. RESPECT Investigators*






RIGHT ATRIUM
LEFT ATRIUM
A
The device delivery sheath is advanced via the inferior vena cava into the right atrium and through the patent foramen ovale. The left atrial disk is then expanded.
Patent foramen ovale
Amplatzer PFO occluder expanded
Atrial septum
Right-to-left blood flow
Patent foramen ovale
LA
RA
LV
RV
Heart
B
The left atrial disk is retracted against the septal wall, and the delivery sheath is pulled back into the right atrium, where the right atrial disk is deployed.
Delivery sheath
RIGHT ATRIUM
C
The device is fully expanded, closing the patent foramen ovale. The delivery sheath is removed.
Waist
Right atrial disk
Left atrial disk

Tipping Point for Patent Foramen Ovale Closure

- Allan H. Ropper, M.D. NEJM sept 2017

The evidence for causation of embolic stroke in any given person is, of course, circumstantial (e.g., atrial fibrillation or carotid stenosis), and it seems reasonable that the presence of a PFO and a sizable interatrial shunt should similarly no longer result in the categorization of a stroke as cryptogenic. One conclusion from the trials is that the potential benefit from closure is determined on the basis of the positive characteristics of the PFO rather than on the basis of exclusionary factors that make a stroke cryptogenic. Restricting PFO closure entirely to patients with high-risk characteristics of the PFO may perhaps be too conservative.

Original Article, NEJM 2019

Dabigatran for Prevention of Stroke after Embolic Stroke of Undetermined Source

RE-SPECT ESUS Steering Committee and Investigators*

In patients with a recent history of embolic stroke of undetermined source, dabigatran was not superior to aspirin in preventing recurrent stroke.There were more clinically relevant nonmajor bleeding events in the dabigatran group.

Take home message

After a cortical infarction, a large shunt and/or Atrial Septum Aneurysm identified with contrast echocardiography, in a non smoking, less than 60 years old patient with no clear atherosclerotic disease, atrial fibrillation or hypertension may be a candidate for PFO closure.

Jan-Eize Lindeboom, cardioloog. St Elisabeth Hospital en Curacao Medical Center