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PERCUTANEOUS CLOSURE OF PATENT FORAME OVALE (PFO): THE NEW SUTURE-MEDIATED SYSTEM VS. OLDER SYSTEMS

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In patients with paradoxical embolism through a Patent Foramen Ovale (PFO) who are at increased risk of recurrent thromboembolic events, transcatheter closure of the atrial communication represents a more effective therapy than prolonged medical treatment. Indeed, percutaneous PFO closure was shown to be safe and feasible with several prosthetic implantable occluder devices implementing different technologies based on an umbrella-like double disc design. Despite the efficacy of PFO occluder devices, their use has a potential risk of early and late complications including, in extreme cases, device dislodgement, atrial wall erosion, perforation, fracture, migration-embolisation, infection, thrombosis, induction of arrhythmias and even death. Additionally, the interatrial septum encumbrance of the prosthetic device may hinder future transseptal puncture and left-sided interventions such as left atrial appendage closure, arrhythmia ablation and mitral valve interventions. Finally, risk of allergic reactions to nickel mesh cannot be excluded, and the necessity of prolonged dual antiplatelet therapy after the procedure might not be tolerated by all patients. Hence, a strategy of percutaneous PFO closure without a permanently implanted device represents an intuitive and revolutionary technique overcoming most of the limitations of traditional PFO occluders. Recently, a new percutaneous "deviceless" system based on surgical suture-mediated PFO closure (NobleStitch EL system) has been introduced in interventional practice. Early results indicate that the new system is feasible in the majority of septal anatomies, and provides an effective closure of PFO comparable to traditional devices with a good safety profile at medium-term follow-up.

BIOGRAPHY

Anca Irina Corciu graduated from School in Medicine and Surgery in Cluj Napoca, Romania, and completed her PhD at Scuola Superiore Sant'Anna, Pisa, Italy. She is working in the department of clinical and interventional cardiology from Policlinico San Donato, Milan, Italy, as an expert in echocardiography, as well as in Cath Lab. She is directly involved in multiple research studies, with many participations at national and international conferences as speaker, and published papers in peer reviewed journals.

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