

Single center experience: retrieval maneuvers of embolized ASD and PFO devices

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Device embolization after interventional ASD/PFO closure is a rare incident. The degree of difficulty in device retrieval varies with the device design. The aim of the study was to report our experience in retrieval maneuvers.

Method: Retrospective single center study of all patients after catheter interventional ASD or PFO closure (n=1370).

Results: The embolization rate was 0.7% (10/1370; Amplatzer n = 5, Occlutech n = 3 Cardio Seal n = 1, Helex n=1). From July 1996 until December 2015 twelve different types of ASD or PFO devices were used (Amplatzer n=1019, Occlutech n= 101, Helex n=56, Cardio Seal n=55, GSO n=54, Starflex n=35, Premere n=23, Ceraflex n=9, Angel Wings n=7, Solysafe n=4, Cardia Star n=3, Rashkind n=2, PFM n=2). Two devices had to be removed surgically (Amplatzer n=1, Occlutech n=1). All other embolized devices were retrieved by catheter interventional means. In a bench test a 26mm Occlutech ASD device was not suitable for snare retrieval, even though a 16F sheath. Different sized snares slipped off the occlude-hub. Retrieval of this Occlutech device was possible by catching it with the grasping forceps of its delivery cable. This technique was used successfully in the next embolized occlutech occluder.

Conclusion: The flat profile and globular hub of the Occlutech Figulla device causes difficulties to retrieve an embolized device with current snares.