Rev Port Cardiol. 2018;37(7):631

Portuguese Society of CARDIOLOGY

Revista Portuguesa de
Cardiologia
Portuguese Journal of Cardiology
www.revportcardiol.org

LETTER TO THE EDITOR

Residual shunt due to spontaneous perforation of polyvinyl alcohol membrane of ASD Occluder; what about after diagnosis?

Shunt residual devido a perfuração espontânea da membrana de álcool polivinílico de um dispositivo de encerramento de CIA. O que sucede após o diagnóstico?

Dear Editor,

We read the article ''Successful percutaneous closure of a residual atrial septal defect due to device failure'' written by S. Aguiar Rosa et al.[1] with great interest. We congratulate the authors for nice three-dimensional echocardiographic images and successful management of the device failure. We also used the CARDIA Ultrasept™ ASD device in 9 patients in our center and three of them became defective after 19 to 25 months, causing significant shunts through the device frame and requiring repeat procedures. We recently reported a patient with a massive shunt due to spontaneous perforation of an Ultrasept™ Occluder polyvinyl alcohol (PVA) membrane.[2] Based on our experience and the many cases reported with different versions of the Ultrasept™ prostheses, and considering the possibility of unnoticed and unreported failures, we would like to point out that we do not completely agree with the statement, ''Although the use of this material (PVA membrane) in ASD closure devices is generally successful...'', in the discussion section.

The treatment options are surgical removal of the failing device and repair with a patch and covering of the damaged membrane with a second device.[3] The authors chose the second option and occluded the defect successfully with a 20-mm Ultrasept™ PFO device. We would also like to mention a few issues about the ''device-in-device technique'' preferred by the authors. Nobody, either previous authors, including ourselves, or the manufacturer, has been able to explain the mechanism of PVA membrane disappearance.[2] Moreover, to our knowledge, Ultrasept™ PFO devices are also covered with a PVA membrane. Surgical repair might therefore be preferable because of the uncertain mechanism of the malfunction. In view of the many risks involved in open heart surgery and taking patient preference into account, the second-device technique can obviously be used. However, a device with a different structure should be chosen to avoid possible recurrence of inadequate endothelialization.

Conflicts of interest

The authors have no conflicts of interest to declare.

References

1. Rosa SA, Ferreira F, Sousa L, et al. Successful percutaneous closure of a residual atrial septal defect due to device failure. Rev Port Cardiol. 2017;36, 475.e1-475.e3.
2. Bozyel S, Sahin T, Dervise E, et al. A massive left-to-right shunt due to delayed spontaneous perforation of polyvinyl alcohol membrane of atrial septal occluder. Arch Turk Soc Cardiol. 2017;45:541–4.
3. Chamié F, Julio M, a Luiz CG. Device-in-device: a transcatheter alternative to surgical explantation of a failing atrial septal defect intracardiac prosthesis. Catheter Cardiovasc Interv. 2016;88:239–43.

Serdar Bozyelç[a,*], Tayfun Sahin[b]

[a] *University of Health Sciences, Derince Training and Research Hospital, Department of Cardiology, Kocaeli, Turkey*
[b] *Kocaeli University School of Medicine, Department of Cardiology, Kocaeli, Turkey*

* Corresponding author.
E-mail address: seribra85@gmail.com (S. Bozyelç).