



## LETTER TO THE EDITOR

### Reply to the Letter to the Editor "Residual shunt due to spontaneous perforation of polyvinyl alcohol membrane of ASD Occluder. What about after diagnosis?"



### Resposta à Carta ao Editor «*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 thank Bozyel and Sahin for their interest in our article "Successful percutaneous closure of a residual atrial septal defect due to device failure",<sup>1</sup> where we reported the case of an uncommon cause of residual shunt through an Ultrasept™ ASD Occluder (Cardia, Egan MN, USA) due to polyvinyl alcohol (PVA) membrane perforation and subsequent transcatheter closure of the residual shunt.

Bozyel and Sahin question our choice of the second device,<sup>2</sup> a 20-mm Ultrasept™ PFO Occluder (Cardia, Egan MN, USA), as it is also covered with the same PVA membrane and there is no definitive explanation for the causal mechanism of the spontaneous perforation. We chose the second device because (a) it has the same type of metal frame as the first device and we hoped this would help the second device achieve better apposition to the first; (b) there are no reports of perforation for the PFO device; and (c) it is a

very low-profile device, which we considered an important factor for device-in-device closure. According to the company data, all cases of device perforation occurred within one year of implantation.

Almost two years after the procedure, the patient remains asymptomatic. Transesophageal echocardiogram confirms that we made the right choice, showing absence of residual shunt and a low device-in-device profile with no impingement on surrounding structures.

In our view, this case report describes a successful way to correct ASD device perforations which avoids the need for a surgical procedure.

## Conflicts of interest

The author has 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.e1–3.
2. Bozyel S, Sahin T. Residual shunt due to spontaneous perforation of polyvinyl alcohol membrane of ASD Occluder; what about after diagnosis? *Rev Port Cardiol.* 2018;37:631.

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