In their article, Bartel et al. demonstrate the superiority of intracardiac echocardiography over conventional transesophageal echocardiography in guiding device closure of atrial septal defects (ASDs) and patent foramen ovale (PFO). Because the authors have not provided the reader with the age of their patients, one is left to presume that the study was carried out in adults (from the 11F sheath used). Hence, their study may not demonstrate that intracardiac echocardiography monitoring can be safely and successfully used in children for device closure of ASDs and PFOs.

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Response
We are grateful for the remarks made by Dr Goldsmith and the interest in our work. First, we would like to point out that our youngest patient was, indeed, 18 years old. Therefore, we agree that we did not explicitly show that intracardiac echocardiography (ICE) is superior to transesophageal echocardiography (TEE) for the closure of interatrial communications in children; we did not make such a claim either. But one needs to take into account that the need for general anesthesia and the hazard of aspiration are certainly major disadvantages of TEE guidance in children. In addition, increasing the safety of device implantation and reducing radiation exposure would also be desirable in the pediatric population. In small children, the risk of esophageal injury from TEE probe insertion, especially if a probe designed for adults is used, must also be considered an unresolved problem.

For that reason, several centers in Europe and the United States have begun to use ICE to optimally guide catheter interventions in children. First experiences show that ICE represents a feasible and easy approach to guide device closure in children and adolescents. The youngest patient ever reported was 2.5 years old. Pediatric use of the AcuNav catheter is authorized in the European Community (CE mark) and in the United States (FDA approval). To our knowledge, no complications from intracardiac or intravascular use of the catheter have been reported. According to the manufacturer, an even smaller version of the AcuNav catheter with a diameter of 8F is being designed. This development would probably lead to more frequent use of ICE guidance in children, a technique so far regarded with caution because of the catheter’s size. In our view, it is probable that ICE is going to replace TEE as a guiding tool for the closure of interatrial communications not only in adults but also in a considerable percentage of children and adolescents, thus eliminating the need for general anesthesia, reducing radiation exposure, and improving the safety of these interventions.

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