

## **Percutaneous closure of atrial septal defect and persistent fossa ovalis: Nuances with implications**

The management of atrial septal defect (ASD) via percutaneous closure has been with us for about four decades with some successive modifications in order to achieve perfect closure and improve patient outcome. Therefore, there is no ambiguity whatsoever on surgical versus percutaneous procedures.<sup>1</sup> Importantly, not all ASD is treated by percutaneous closure technique, and not even the secundum septal defect whose anatomy is properly adapted for percutaneous closure is universally treated with such (percutaneous occlusion) technique. Thus in

describing the treatment of ASD, it is imperative to clearly state what treatment option is adopted; either medical approach (of which percutaneous closure is included) or surgical. And as percutaneous therapies are gradually replacing surgical repair of ASD (secundum defect), proper preoperative assessment of the patient and the anatomy by using echocardiography cannot be overemphasised.<sup>2</sup> Complications resulting from the use of the percutaneous closure ranges from minor to life-threatening and potentially fatal as such long-term follow-up is necessary to completely estimate the safety and efficacy of the devices.<sup>2,3</sup> The knowledge of the potential complications of device closure and their predictors will help in reducing their future occurrence.<sup>3</sup>

In some of the defects like sinus venosus defect, the proper application of surgical option is associated with low morbidity and mortality.<sup>4</sup> However, there is the requirement of cardiopulmonary bypass carrying some risk and complications like sinus node dysfunction and venous obstruction.<sup>4</sup> In conclusion, neither percutaneous nor surgical procedures are used exclusively in all settings. The choice of procedure rests on proper patient assessment and determination of the type of lesion present is important as this would ensure optimal outcome.

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