coronary artery, the blood flow is always centrifugal, flowing from the center to the periphery, and from bigger to smaller arteries. In contrast, in atresia of the LMCA, the circulation of blood in the left coronary system is reversed. The blood flows from the right to the left coronary system via one or more collateral arteries, and from the periphery to the center (centripetal pattern).[3,4]

Our patient's myocardial perfusion scintigraphic findings were associated with reversible ischemia at the anterior and posterolateral myocardial region. We know that cardiac scintigraphy is a subjective modality for ischemia, and it has been demonstrated that in patients with single-vessel total coronary artery occlusion, myocardial ischemia is almost always present, irrespective of the presence or absence of angiographic collaterals.[5]

Consequently, all our findings led us to the conclusion that our elderly patient had LMCA atresia with significant collateral formation that had developed over a period of years.

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References

1. Topuz M, Çölkesen Y, Çoşgun M, Çaylı M. An elderly patient with atresia of the left main stem. Turk Kardiyol Dern Ars 2015;43:497.
2. Fortuin NJ, Roberts WC. Congenital atresia of the left main coronary artery. Am J Med 1971;50:385–9.
3. Musiani A, Cernigliaro C, Sansa M, Maselli D, De Gasperis C. Left main coronary artery atresia: Literature review and therapeutical considerations. Eur J Cardiothorac Surg 1997;11:505–14.
4. Gay F1, Vouhé P, Lecompte Y, Guarnera S, Tamisier D, Kachaner J, et al. Atresia of the left coronary ostium. Repair in a 2-month-old infant. [Article in French] Arch Mal Coeur Vaiss 1989;82:807-10.
5. He ZX, Mahmarian JJ, Verani MS. Myocardial perfusion in patients with total occlusion of a single coronary artery with and without collateral circulation. J Nucl Cardiol 2001;8:452–7.

Is balloon sizing still necessary in the era of real-time 3D transesophageal echocardiography?

To the Editor,

We read with interest the recent paper in your journal by Arslan et al. entitled 'Corrected balloon occlusive diameter to determine device size during percutaneous atrial septal defect closure'. Arising out of this, we believe that the following question must be raised: Is balloon sizing still necessary in the era of real-time 3D transesophageal echocardiography?

Transcatheter closure of interatrial septal defects, including secundum type atrial septal defects (ASDs) has become a safe and effective method when performed at experienced centers.[1,2] However, among centers performing transcatheter ASD closure various technical differences exist in selection of device size, such as balloon sizing, and echocardiographic guidance in the use of transoesophageal (TEE), 3-dimensional (3D) and intracardiac echocardiography (ICE). Furthermore, there exists no international consensus regarding the sizing issue.

In their paper, Arslan et al.[3] reported that utilization of corrected balloon occlusive diameter (BOD) might be of benefit in deciding size of ASD occluder device. In the study, corrected BOD was shown to be determined by rim durability and indentation formation, device size being the diameter measured when there is bilateral indentation of the inflated balloon; device size=measured diameter +2 mm (for defects <20 mm) or 4 mm (for defects ≥20 mm) in instances of unilateral indentation or bilateral minimal indentation; device size=measured diameter +1 mm (for defects <20 mm) or 2 mm (for defects ≥20 mm) when there is unilateral complete indentation on one side and minimal indentation on the other.

Such a formulation is sophisticated to implement. Despite the traditional paradigm using balloon sizing in the closure of ASDs, recent studies have shown TEE evaluation without balloon sizing to be safe and effective, and possibly superior to balloon sizing in transcatheter closure of secundum type ASDs.[4] As mentioned by Arslan et al.[3], oversizing, which may culminate in serious and undesired peri-procedural complications, is the main problem during balloon sizing. It has also been reported that balloon sizing is associated with higher procedural and fluoroscopy time and procedural cost without any advantage for procedural success.[5]

Accurate imaging of the anatomic features of the ASD is critical for appropriate patient selection, planning, and peri-procedural guidance in order to avoid complications. Traditionally, TEE imaging has been used by many centers during transcatheter closure of secundum type ASDs, as this is crucial in defining the "anatomic details" of an ASD before implantation of closure device (rims, maximum defect size and shape, etc). As a novel imaging modality during transcatheter ASD closure, 3D-TEE is an advantageous imaging tool that can accurately assess size, shape, orientation, numbers of orifices and rim status of an ASD in a single view.[6]

Besides its technological advantages, 3D-TEE is a noninvasive, widely available, portable test of lower cost. I am of the opinion that implementation of 3D-TEE guidance during ASD closure will increase procedural success and reduce complication rates in the near future. Therefore, more studies are needed to reach a common consensus on the issue of comparison of balloon sizing techniques, 2D-TEE, ICE and 3D-TEE data during transcatheter closure of ASDs.

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References

1. Oto MA, Aytemir K, Ozkutlu S, Kaya EB, Kabakcı G, Ateş AH, et al. Percutaneous closure of interatrial septal defects: mid-term follow-up results. [Article in Turkish] Turk Kardiyol Dern Ars 2011;39:385–95.
2. Aytemir K, Oto A, Özkutlu S, Canpolat U, Kaya EB, Yorgun H, et al. Transcatheter interatrial septal defect closure in a large cohort: midterm follow-up results. Congenit Heart Dis 2013;8:418–27.
3. Arslan Ş, Çağırcı G, Bayar N, Köklü E, Yüksel İÖ, Küçükseymen S, et al. Corrected balloon occlusive diameter to determine device size during percutaneous atrial septal defect closure. Turk Kardiyol Dern Ars 2015;43:420–6.
4. Gupta SK, Sivasankaran S, Bijulal S, Tharakan JM, Harikrishnan S, Ajit K. Trans-catheter closure of atrial septal defect: Balloon sizing or no Balloon sizing - single centre experience. Ann Pediatr Cardiol 2011;4:28–33.
5. Quek SC, Wu WX, Chan KY, Ho TF, Yip WC. Transcatheter closure of atrial septal defects-is balloon sizing still necessary? Ann Acad Med Singapore 2010;39:390–3.
6. Roberson DA, Cui W, Patel D, Tsang W, Sugeng L, Weinert L, et al. Three-dimensional transesophageal echocardiography of atrial septal defect: a qualitative and quantitative anatomic study. J Am Soc Echocardiogr 2011;24:600–10.

Does occupation refer to an advantage or obstacle before transradial cardiac catheterization?

To the Editor,

In a recent issue of your journal, Aykan et al. presented the predictors of radial artery diameter in patients suitable for transradial coronary angiography in their paper entitled 'Prediction of radial artery diameter in candidates for transradial coronary angiography: is occupation a factor?'[1] They reported wrist circumference, shoe size and occupation as independent predictors of radial artery diameter. In addition, radial artery diameter was found as smaller in patients with sedentary office work than in physically active outdoor workers (2.42±0.45 mm *vs.* 2.81±0.37 mm, p<0.001).

Transradial access during cardiac catheterization is widespread among interventional cardiologists as a safe and viable approach with a significantly reduced incidence of major access site-associated complications compared to the transfemoral approach.[2] However, the transradial approach is not free of common complications like asymptomatic radial artery occlusion, non-occlusive radial artery injury and radial artery spasm. Early diagnosis and immediate management of all these may be vital for the patient. Radial artery occlusion is known as the most common complication (~5–40% depending on center and study specific protocols) encountered after the tran-