A 38-year-old man was transferred to our institution for percutaneous closure of an atrial septal defect (ASD). The TEE echocardiographic examination performed at the referring institution reported the presence of an uncomplicated ostium secundum ASD with adequate rims for percutaneous closure with an Amplatzer device. A repeated transoesophageal examination using the Matrix 3D TEE probe (Philips Healthcare, Andover, MA, USA) revealed a fenestrated ASD with four distinct orifices with insufficient rims for percutaneous closure (Figure 1A). This unusual ASD morphology could only be seen after cropping of the zoom acquisition. In view of these findings, the operative team decided to cancel the percutaneous procedure due to the high likelihood of failure.

This patient underwent surgical closure of his ASD, and the intra-operative findings were consistent with the 3D reconstruction exhibiting a fenestrated interatrial communication with four holes (Figure 1B).

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

doi:10.1093/eurheartj/erj276
Online publish-ahead-of-print 6 December 2011

The role of real time 3D TEE in defining the anatomy of atrial septal defects and modifying the therapeutic approach

Ivan Melgarejo*, David Orozco, Federico Nuñez, Carlos Mauricio Rubio, and Roberto Lang

1Non Invasive Cardiology Department, Fundación Abood Shaio, Cardiovascular Center, Diagonal 115a No. 70c -75, Bogotá, Colombia; 2Cardiovascular Anesthesiology Department, Fundación Abood Shaio, Cardiovascular Center, Bogotá, Colombia; 3Cardiovascular Surgery Department, Fundación Abood Shaio, Cardiovascular Center, Bogotá, Colombia; and 4Non Invasive Cardiac Imaging Laboratories, University of Chicago Medical Center, Chicago, IL, USA

*Corresponding author. Tel: +57 1 5938210; fax: +57 1 2714930. Email: ivan.melgarejo@shaio.org; ivanmel@gmail.com

Received 25 September 2011; accepted after revision 10 November 2011

A 38-year-old man was transferred to our institution for percutaneous closure of an atrial septal defect (ASD). The TEE echocardiographic examination performed at the referring institution reported the presence of an uncomplicated ostium secundum ASD with adequate rims for percutaneous closure with an Amplatzer device. A repeated transoesophageal examination using the Matrix 3D TEE probe (Philips Healthcare, Andover, MA, USA) revealed a fenestrated ASD with four distinct orifices with insufficient rims for percutaneous closure (Figure 1A). This unusual ASD morphology could only be seen after cropping of the zoom acquisition. In view of these findings, the operative team decided to cancel the percutaneous procedure due to the high likelihood of failure.

This patient underwent surgical closure of his ASD, and the intra-operative findings were consistent with the 3D reconstruction exhibiting a fenestrated interatrial communication with four holes (Figure 1B).