

World Cardiology Summit 2020: Transcatheter ASD closure in a patient with Dextroversion: A case report Yasmin Abdelrazek Ali1

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Introduction:

Dextroversion of the coronary heart is a kind of dextrocardias, the coronary heart is positioned in the proper hemithorax besides inversion of chambers. This congenital anomaly is the end result of a counter-clockwise rotation of a commonly developed coronary heart in the proper hemi thorax. It may additionally be related with specific cardiac and pulmonary anomalies, or may additionally be isolated. It has been described beneath unique names: dextrorotation, remoted dextrocardia, dextrocardia with atria in situs solitus. In 1998 Hakim et al., pronounced a case of ASD transcatheter closure in a case of dextrocardia with situs versus, they used left atrium angiogram in the proper anterior indirect view with cranial angulation to visualize the IAS, observed by using profitable positioning of Amplatzer system throughout the defect. Maldjian et al., studied a case of remoted dextroversion by means of MSCT in 2006 and described that the proper atrium was once posterior and to the proper of the left atrium. The morphologic proper ventricle used to be posterior, barely most beneficial and to the proper of the morphologic left ventricle. In dextroversion, the interatrial septum is directed to the right, with the morphologic proper atrium located to the proper and barely posteriorly, and the morphologic left atrium to the left and barely anteriorly. Galal et al., suggested profitable closure of fenestrated septum via Amplatzer cribriform machine in a case with situs solitus and dextrocardia, they mentioned concern in system positioning, but with no unique approach recommended.

Keywords: Congenital coronary heart disease, Left higher pulmonary vein, Dextrocardia.

Abbreviations:

2D: two Dimensional; ASD: Atrial Septal Defect; ASO: Atrial Septal Occluder; AV: Atrioventricular; CXR: Chest X-ray; ECG: Electrocardiography; IAS: Interatrial Septum; LUPV: Left Upper Pulmonary Vein; MSCT: Multislice Computed Tomography; PA: Pulmonary Artery; PR: Pulmonary Regurgitation; RA: Right Atrium; RUPV: Right Upper Pulmonary Vein; RV: Right Ventricle; TEE: Transesophageal Echocardiography; VA: Ventriculoarterial; VSD: Ventricular Septal Defect

Case presentation:
We existing a case of secundum ASD in a affected person with dextroversion, situs solitus, AV concordance and VA concordance. Patient used to be referred for transcatheter closure of ASD. Her transthoracic echocardiography confirmed a 7 mm secundum ASD, Upper ordinary RV size, small restrictive VSD two mm and a dilated important pulmonary

artery. Transesophageal echocardiography confirmed an eleven mm defect with ordinary orientation of inter atrial septum due to cardiac dextroversion. Usual method for positioning of ASD Amplatzer machine (ASO 11) failed with prolapsing of the machine into proper atrium. Failed proper top pulmonary vein technique. With profitable positioning of the system throughout the interatrial septum the use of left higher pulmonary vein technique.

Method:

We existing a case of a girl affected person 3-year old, eleven Kg. She is the 2nd in order of start of two kids of non-consanguineous marriage. Her mom complained of recurrent chest infection. She had inappropriate perinatal records and beside the point household history. On examination, the most impulse was once felt to the proper of the sternum, with no precordial bulge, no thrill, and harsh pansystolic murmur heard to the proper of the sternum. ECG confirmed excessive counterclockwise rotation of the heart, and a excessive R wave in all leads from the left and proper aspect of the chest (due to the anterior function of the left ventricle). CXR confirmed cardiac apex to the proper with outstanding pulmonary artery occupying higher left cardiac border and distinguished pulmonary vascular markings until the outer 1/3 of pulmonary tree. Transthoracic echocardiography confirmed visceral and cardiac situs solitus, AV concordance, VA concordance, secundum ASD measuring 7 mm shunting left to proper with ample rims all round barring for absent aortic rim. Small perimembranous subaortic VSD (ventricular septal defect) two mm shunting restrictively left to right. Upper ordinary RV measurement with dilated major pulmonary artery. Mild PR (pulmonary regurgitation) with estimated ordinary imply pulmonary artery pressure. Cardiac catheterization beneath well-known anesthesia used to be done. We seen marked rotation of the ventricles with the aid of the proper flip of the catheter from the proper atrium into the proper ventricle, and with the aid of the proper to the left course of the predominant pulmonary artery. Transesophageal echocardiography was once used to information transcatheter ASD closure, which confirmed a secundum ASD measuring eleven mm in its most diameter, with ample rims all round barring for absent aortic rim. Normal pulmonary venous drainage into left atrium and regular systemic venous drainage to proper atrium have been assured. An Amplatzer septal occluder eleven used to be superior throughout lengthy sheath with left atrial disk opened in left atrium. Multiple trials have been achieved to location the system throughout the IAS however failed with machine prolapse into RA (right atrium). One trial to location the system

from the proper top pulmonary vein used to be performed however failed due to machine prolapsing into RA as well. Finally, profitable placement of the system used to be done via a left higher pulmonary vein approach via launch of left atrial disc into left top pulmonary vein accompanied through launch of proper atrial disc and withdrawal of the system to be desirable placed throughout the IAS.

Post method ECG showed everyday sinus rhythm with no coronary heart block. CXR showed nicely seated gadget. The affected person used to be discharged domestic on Aspirin and guidelines for endocarditis prophylaxis for 6 months. Follow up transthoracic echocardiography three months after the technique confirmed properly seated machine with no residual waft across.

Conclusion:

We advise left top pulmonary vein method for secure and direct positioning of ASD system throughout interatrial septum in sufferers with dextroversion. To the first-class of our information no unique approach has been described earlier than for profitable transcatheter secundum ASD closure in sufferers with dextroversion. We propose left top pulmonary vein approach for secure and direct positioning of ASD gadget throughout interatrial septum in sufferers with dextroversion.