

Development of dyspnea on young female patient with D transposition of great arteries operated by Senning procedure

Vesna Pehar Pejčinović^{1*}, Dragan Javoran¹, Željko Madžar¹, Rajko Miškulin², Marko Boban¹, Viktor Peršić¹

¹Thalassoterapija Opatija, Opatija, Croatia

²University Hospital Center Rijeka, Rijeka, Croatia

Complete transposition of the great arteries is common congenital heart disease in new-borns and infants. In this malformation, origination of the aorta is in the right ventricle and origination of the pulmonary artery is in the left ventricle. Systemic venous blood returns through the right atrium to the right ventricle and then to the aorta, and pulmonary venous blood returns through left atrium to the left ventricle and then to the pulmonary artery. In these circumstances after birth, the life is sustained with existing communication between right and left circulation, eg. ventricular septal defect, atrial septal defect or patent ductus arteriosus. Clinical manifestations are dyspnea, cyanosis, hypoxemia and congestive heart failure. Surgical management options are:

1. atrial switch procedure that was developed in 1950s (either Mustard or Senning operation), or
2. arterial switch procedure that was developed in 1980s.

After the first one, most patients in the adulthood (up to 40%) have mild/severe tricuspidal regurgitation, relative right ventricular ischaemia and signs of the right ventricular dysfunction, pulmonary hypertension, obstruction of the venous conduit, or obstruction of the pulmonary venous baffle, rhythm disturbances as well as shortened life expectancy. After arterial switch procedure patients who reach adulthood can

develop neopulmonary or neo-aortic valve disturbances, rhythm disturbances, coronary artery disease.

In our case report, young female, 24 years old, who underwent Senning operation in the childhood, is now presented with signs of dyspnoea on exercise. In our examinations (echocardiography, cardiac MRI) we have shown the cause of the same: subvalvular stenosis of the pulmonary valve, with high gradient through the left ventricle outflow tract and the fistula between the venous conduit and right atrium. Now, we consider the further treatment options in this patient.

KEYWORDS: D transposition of great arteries, Senning procedure, subvalvular stenosis of the pulmonary valve.

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*Address for correspondence: Thalassoterapija Opatija, Maršala Tita 188/1, HR-51410 Opatija, Croatia.

Phone: +385-51-202-724

E-mail: pehar.vesna@gmail.com

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