

Total Anomalous Systemic Venous Drainage to the Left Atrium: A Rare Case of Left Atrial Hysomerism without Intra-Cardiac Defect

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Rec date: Nov 27, 2014; **Acc date:** Jan 22, 2015; **Pub date:** Jan 24, 2015

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Keywords: Coronary sinus; Vena cava superior; Echocardiography

Introduction

Total anomalous systemic venous return is a very rare malformation, where the vena cava inferior (IVC), the vena cava superior (SVC), and coronary sinus drain into left atrium. In this case, we report an anomaly characterized by a left atrial isomerism with anomalous drainage of IVC, SVC, SSSVC, and coronary sinus into left atrium in a small female-baby.

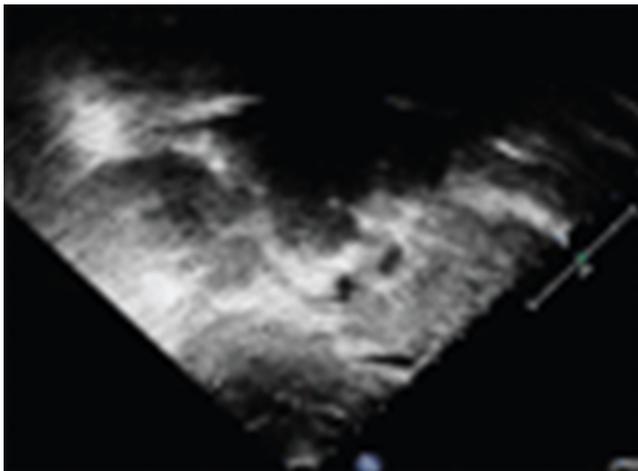


Figure 1: Two-dimensional (2D) echocardiography with substernal coronal view showing the relationship of the aorta and inferior vena cava (IVC) suggestive of left isomerism

Case Report

We reported the history of S. She received fetal diagnosis of "total anomalous systemic venous connection TASVC and persistent left superior vena cava draining to left atrium"

Personal history

She was born at 38^w, weight kg 2.860, she was cyanotic at birth (oxymetry sat. about 70%). At 3 days of life she was submitted to an external echocardiography (Figure 1) and a cardiac catheterization, at our Paediatric Cardiology, which showed situs visceral solitus and left anatomical conformation of both atria and confirmed TASVC (Figures 2-4).

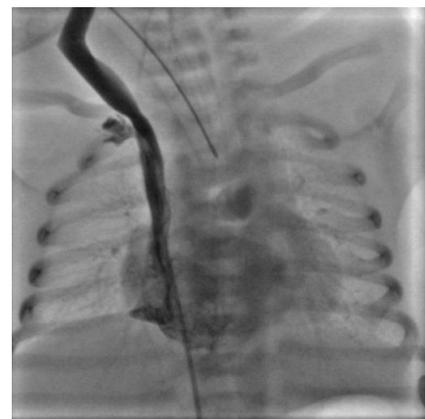


Figure 2: Conformation of RVCS

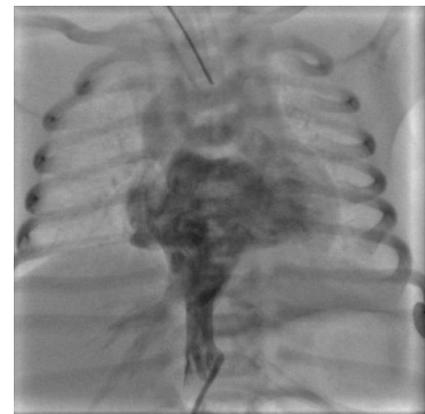


Figure 3: Confirmation of VCI

Surgery intervention

At 4 days of life we performed a surgical intervention with atrial septostomy and outpatient clinical observations report perioral cyanosis, oxymetry sat was 80% and adequate atrial blood mixing at echocardiography. During months we observed the patient with no clinic variations.

When she was 10 months old, she was exposed to a surgical atrial septal reconstruction with bovine pericardial patch draining the vena

cava to the right side, she received a hypothermic CEC and a Custodiol Cardioplegia (Figure 5 and 6).



Figure 4: Confirmation of SSSVC

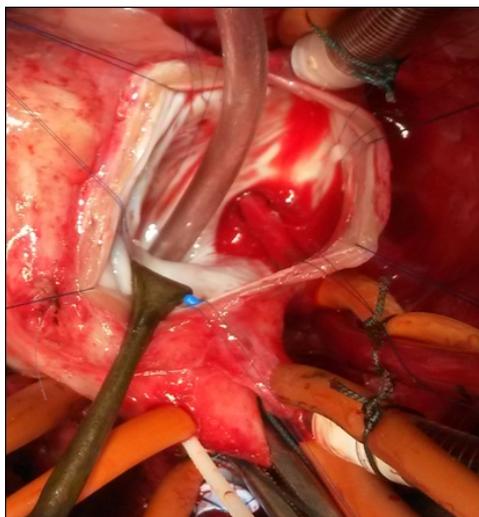


Figure 5: Surgical view of IVC, SVC, SSSVC

Follow up

During the Postoperative she was subjected to echocardiographic controls and electrocardiograms. Echocardiography controls showed a good surgical outcome and small septal defect with L-R shunt, the electrocardiograms observed a postoperative complication whit junctional rhythm, confirmed by 24-hour Holter. After surgical intervention she took therapy with Cardioaspirin for 6 months.

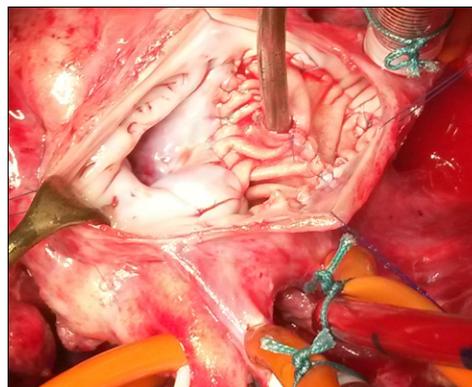


Figure 6: Patch draining the vena

Conclusion

S. is now a 15 months old little girl in good clinical conditions (oxymetry sat. 85%), echocardiography controls confirmed a good surgical outcome and there were no further arrhythmias evaluated with Holter.