



Complex congenital heart disease

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Clinical Image Description

A male infant, delivered prematurely at 36 weeks and 2 days, received a prenatal diagnosis of a cardiac malformation, specifically a ventricular septal defect. He was admitted on the neonatal intensive care unit for monitoring and potential initiation of therapy. At birth, only transient alveolar recruitment was necessary.

Throughout hospitalization, sequential echocardiograms were performed, revealing complex congenital heart disease with heart failure resulting from a subaortic ventricular septal defect (Figure 1) and a secundum-type atrial septal defect (Figure 2), along with dilation of the right cardiac chambers (Figure 3, 4). Additionally, a partial anomalous pulmonary venous drainage from the right upper lobe to the superior vena cava was detected (Figure 5). However, less commonly observed in

cases of similar malformation, all four pulmonary veins were identified draining into the left atrium. Confirmation of these anomalies was obtained through computed tomography angiography.

The infant maintained spontaneous ventilation, despite occasional periods of tachypnea, until the eighth day of life when respiratory distress worsened, requiring non-invasive mechanical ventilation with oxygen therapy. Since then, the patient also has been undergoing decongestive therapy with furosemide and spironolactone.

Despite therapeutic and nutritional optimization, the infant underwent surgical correction of the cardiac defects at 2 months of age.



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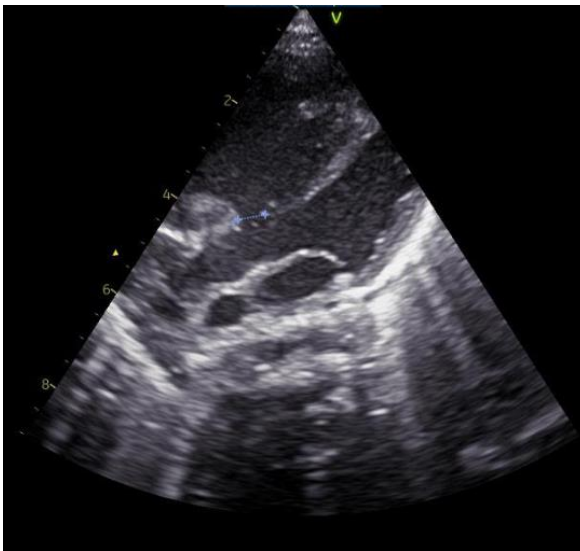


Figure 1: Subaortic ventricular septal defect.

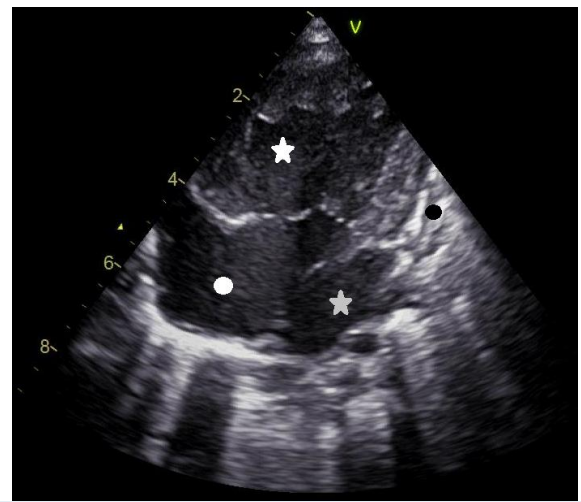


Figure 3: Dilation of the right atrium (white circle) and ventricle (white star) that collapse the left atrium (gray star) and left ventricle (black circle).



Figure 2: Secundum-type atrial septal defect (white arrow).

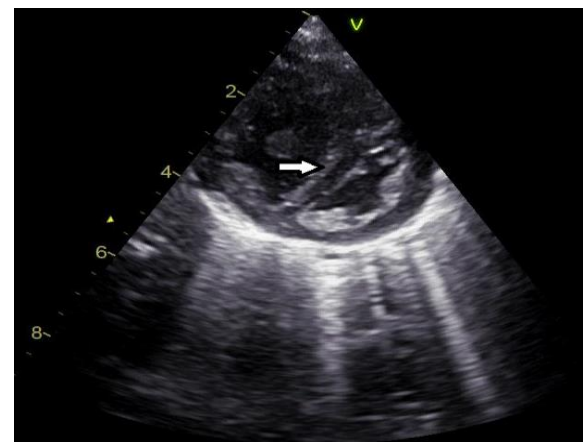


Figure 4: Predominance of the right cavity due to increased pressure in the right cardiac chambers bulging of the interventricular septum to the left (white arrow).

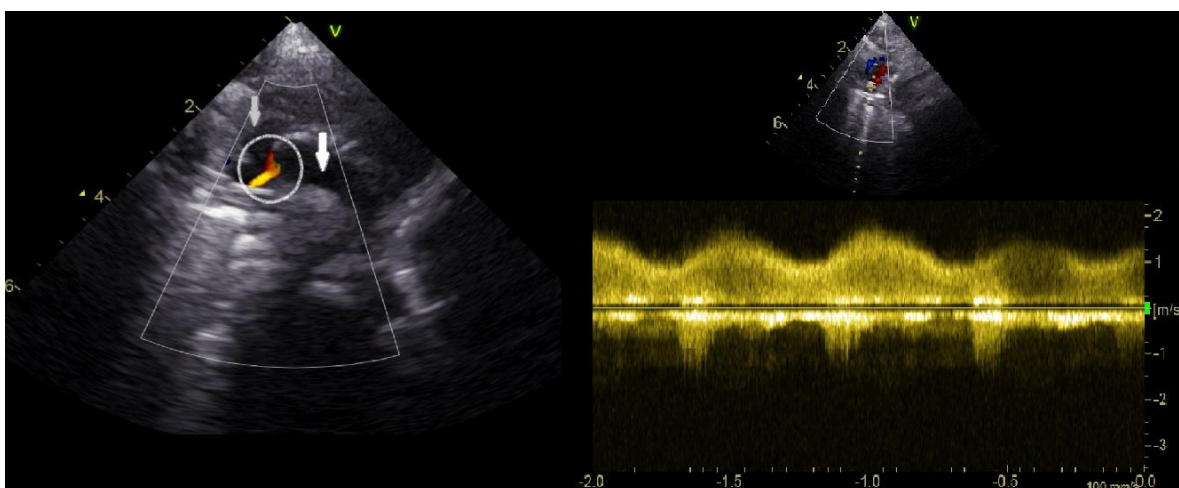


Figure 5: Partial anomalous pulmonary venous drainage from the right upper lobe to the superior vena cava (gray arrow) with continuous flow (white circle and right side of the image). Still prominent aortic arch/descending aorta (white arrow).