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LETTER TO THE EDITOR

Leftward Displacement of Septum Primum in Children With Congenital Heart Disease

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To the Editor,

In a recent issue of your journal we read the interesting paper by Park et al. [4], entitled "Leftward displacement of septum primum in hypoplastic left heart syndrome". In this study, the investigators report on the frequency of leftward displacement of septum primum (LDSP) in children with hypoplastic left heart syndrome (HLHS), and using echocardiography they correlate this pattern of atrial septation with the other anatomic cardiac features [4].

In the Introduction and in Discussion sections of the article, the investigators affirm that "leftward displacement of septum primum is not known to occur in other forms of congenital heart disease".

Actually, leftward malposition of the septum primum is a well know anatomic finding occurring not only in HLHS [1, 4, 6] but also in other rare cases of cardiac defect with situs solitus [1, 2, 5, 7], particularly in patients with heterotaxy and polysplenia (left isomerism) [3, 5].

In children with HLHS, the superior limbic band (septum secundum) is present; in some cases, the septum primum shows a leftward and posterior deviation of its superior attachment, which is far away from the septum secundum [1, 4, 6]. This anatomic pattern usually coexist with normal pulmonary venous drainage [1, 4, 6].

In polysplenia, the superior limbic band (septum secundum) (~95 %) is absent, and in some cases the superior margin of the septum primum is deviated to the left and is inserted on the left atrium wall [3]. This anatomic pattern usually results in partial anomalous pulmonary vein drainage with the right pulmonary veins draining in to the right atrium [3, 5]. LSDP has also been described in association with other rare cardiac defect with situs solitus, including total anomalous pulmonary venous drainage [1, 2, 5, 7].

These different anatomic phenotypes of atrial septum may be in pathogenetic relation with the presence of left-sided obstructions in children with HLHS, as suggested in the article by Park et al. [4] but also in those with polysplenia [3, 5], which frequently presents systemic obstructions [3, 5].

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