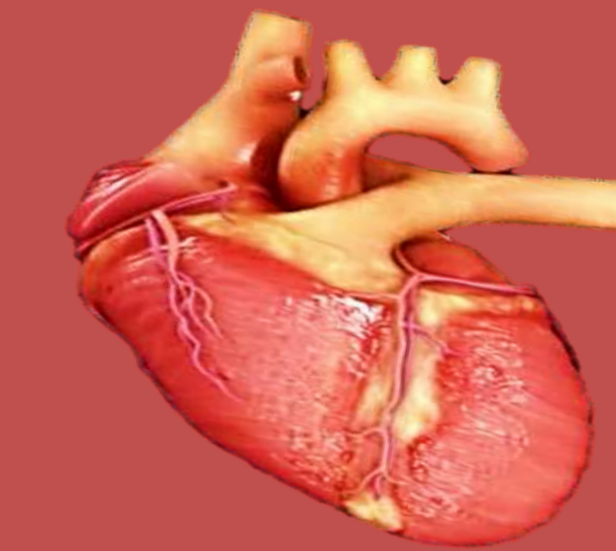




The Relation Between Lithium and Cardiac Malformations

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Introduction

There has been concern that exposure to lithium early in pregnancy may be associated with a marked increase in the risk of Ebstein's anomaly a right ventricular outflow tract obstruction defect (1) is a congenital heart defect affects the tricuspid valve which the septal and posterior leaflets are displaced towards the apex of the right ventricle of the heart (2)

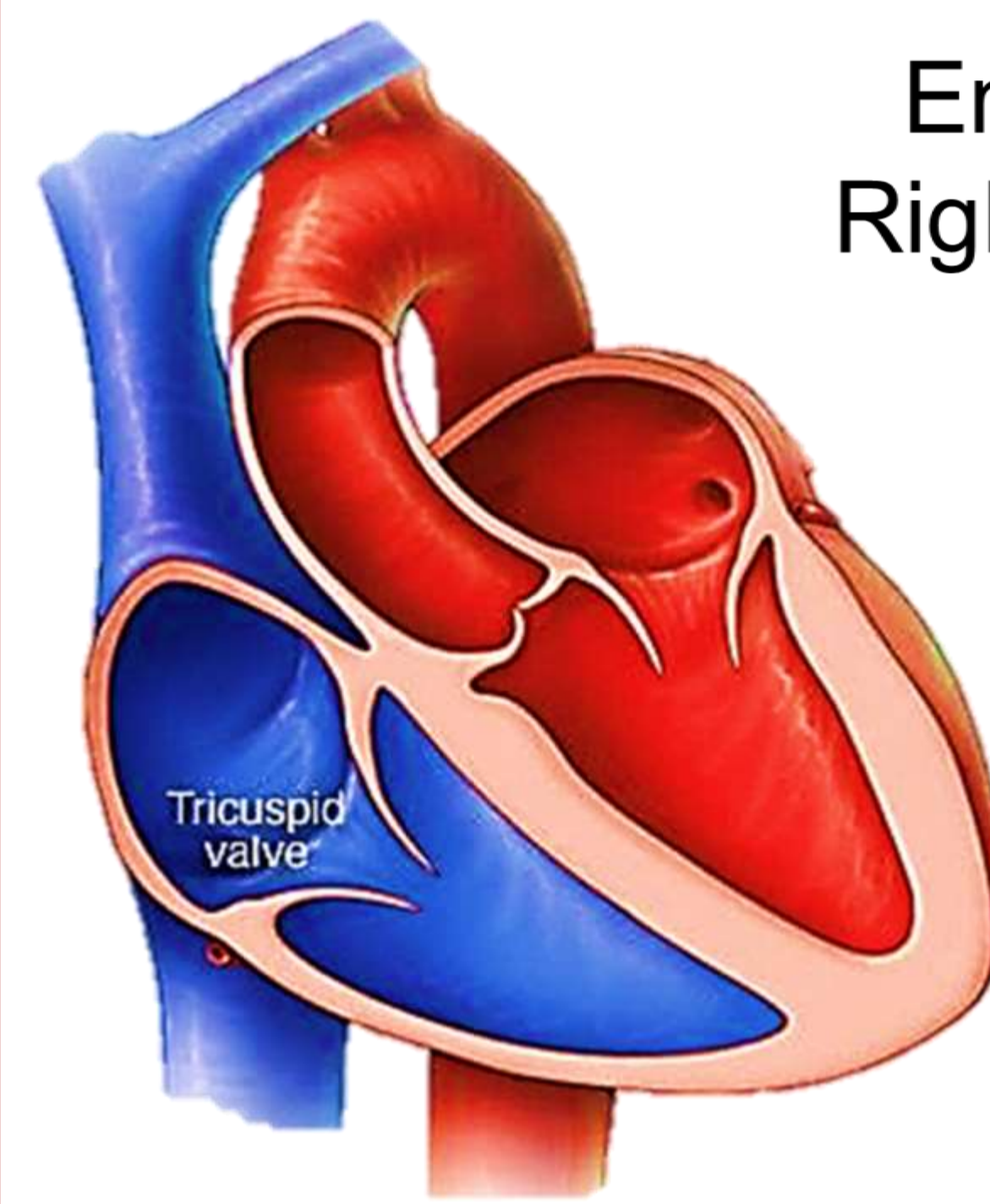
Background:

The international register of lithium babies evaluating infants born to mothers who were treated with lithium early in pregnancy suggested a risk of Ebstein's anomaly on the basis of two cases associated with lithium exposure (1) .

Methods

has conducted a cohort study involving 1,325,563 pregnancies in women who enrolled in medicaid and who delivered a live-born infant between 2000 and 2010. the final report of this cases included data on 225 infants born to lithium-exposed women; 18 infants had a congenital cardiac defects Ebstein's anomaly on the basis of this data.

Normal



Ebstein's anomaly

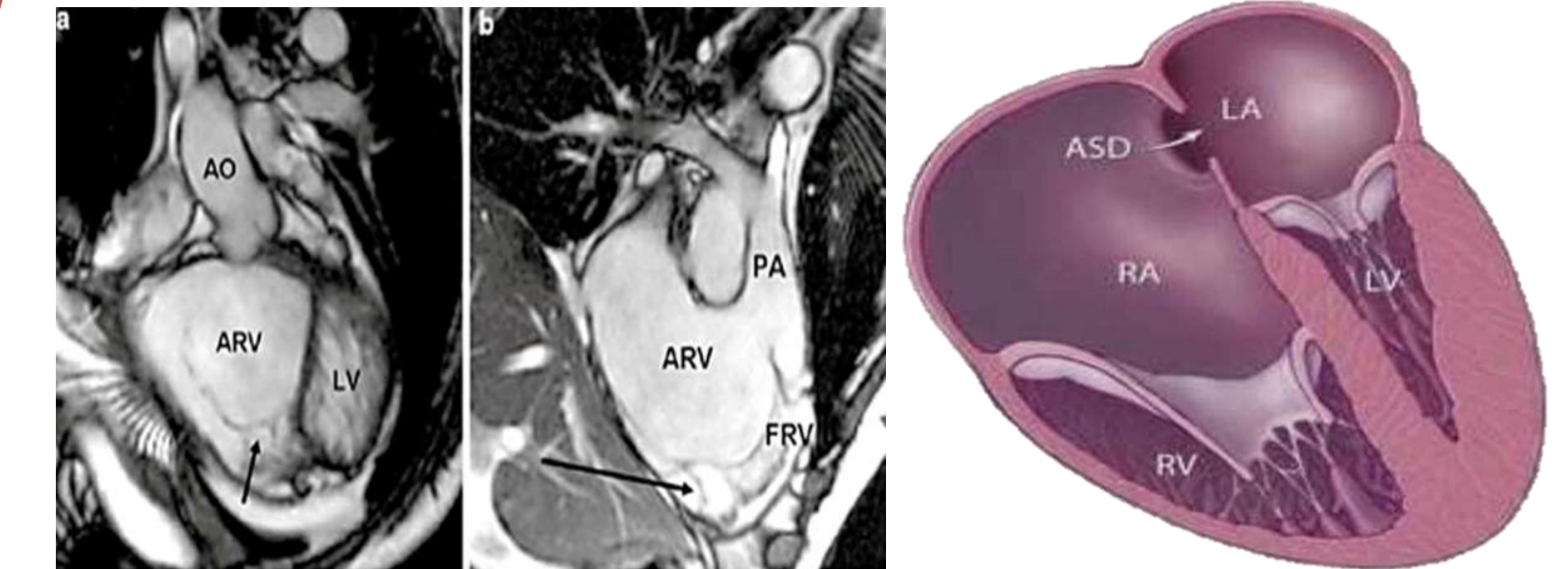
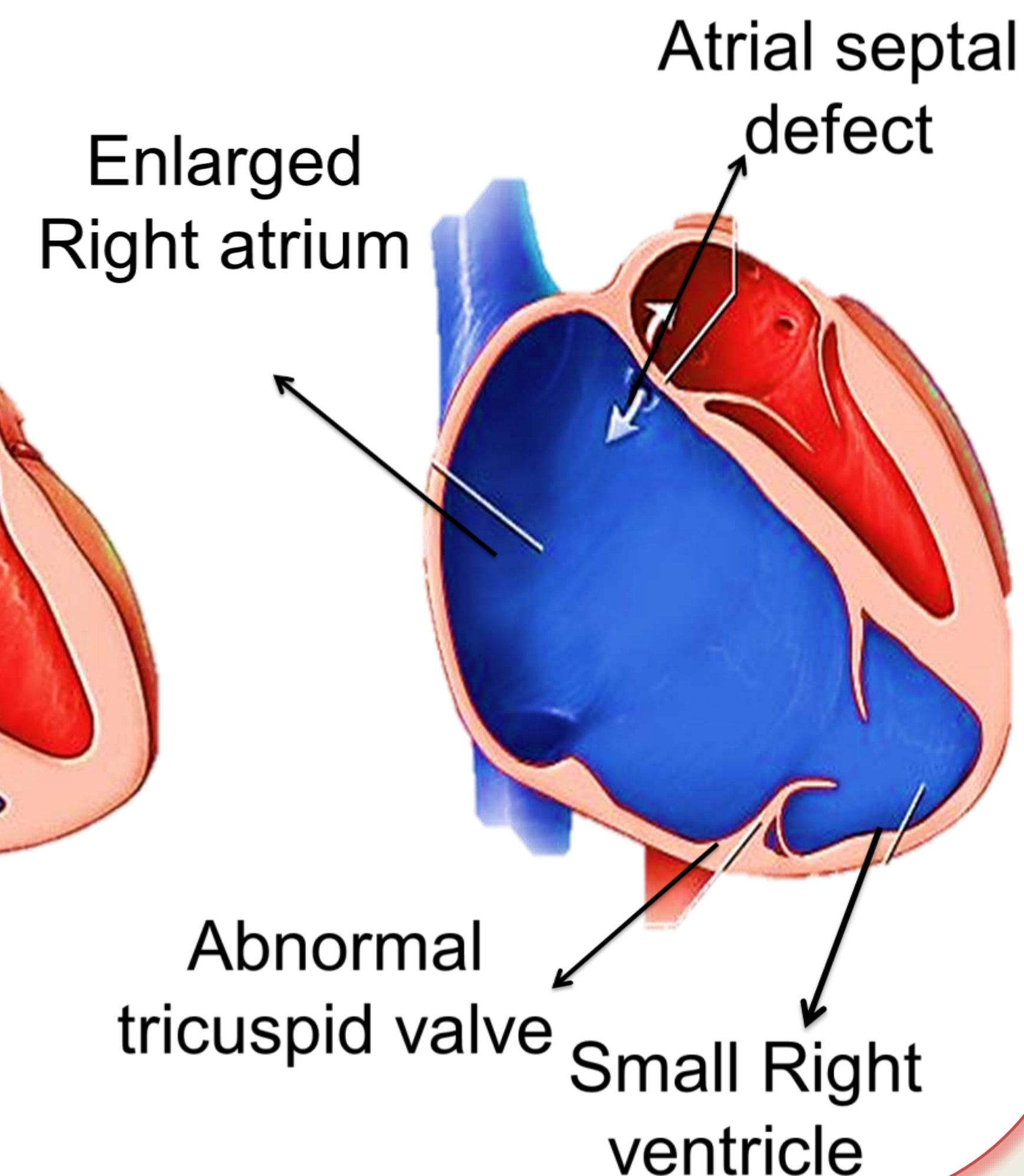


Figure 2: severe Ebstein's malformation of tricuspid valve

Results

The final result of this cases included data on 225 infants born to lithium-exposed women ; 18 infants had a congenital cardiac defects (Ebstein's anomaly) on the basis of this data (3) .



Figure1: Chest radiograph of a patient who had Ebstein's anomaly with atrial septal defect

conclusions

Our results suggest that maternal use of lithium during the first trimester is associated with an increased risk of cardiac malformations on the order of 1 additional case per 100 live births when there was exposure early in pregnancy and this association is dose-dependent with a risk increased beyond doses of 900 mg per day .

References

- (1) Jefferson JW, Johnson EM, Hernandez-Diaz S. pharmacoepidemiol Drug Saf 2013;22:16-24. PLoS, A
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- (3) Physicians' desk reference. 53rd ed. Monroale, NJ: Medical Economics , 2002. Am J Psychiatry 2004;161:608-620