Evaluation of pregnant women with congenital heart diseases: maternal evolution and perinatal outcomes.

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Abstract
The advancement of the diagnostic methods of cardiac diseases and their malformations has contributed to the increase in the incidence of findings of congenital heart diseases in developed and underdeveloped countries. In the last decades, this progress has allowed the increase in quality and life expectancy of patients with congenital heart defects, which has made significant changes to the profile of the population. Women with congenital heart defects are increasingly reaching reproductive ages and becoming pregnant. During pregnancy, physiological changes presents a risk factor that needs medical monitoring for good results. This means that, in patients with congenital heart diseases, there is a greater risk to develop major complications when compared to non-cardiac patients, and a strict obstetric follow-up is essential. Currently, heart diseases associated pregnancy is one of the first non-obstetric causes of maternal death in developed and underdeveloped countries, and affects 1-3% of pregnancies in Western countries. The present study aims to analyze the occurrence of congenital heart diseases in pregnant women attended at CAISM / UNICAMP Specialized Pre-natal outpatient clinic in the period between 2000 and 2015. A retrospective observational cohort study was performed by reviewing medical records of 298 pregnant women who attended the outpatient clinic and gave birth to this service. Pre-natal evolution, need for cardiologic medication during pregnancy and functional class at the beginning of gestation were observed.

Key words: Pregnancy, Congenital heart disease, Heart disease.

Introduction
In Brazil, the importance of studies on heart disease in pregnancy is justified by the fact that the mean incidence of heart disease in pregnancy is 4.2%, eight times higher than in international averages and, if considered the major cause of death. Maternal cycle in the pregnancy- maternal cycle in Brazil.

Results and Discussion
On the present study 68 patients had congenital heart malformations. The mean age of the patients was 26 years (14 to 46) and the mean parity was 2 (1 to 11). The mean gestational age at delivery was 37 + 3 (27+2 to 42+2) weeks. The vaginal delivery route was 49%. The mean weight of the newborn was 2795 g (590 g at 4780 g) and the mean Capurro was 38 + 3 weeks (32 + 3 to 41 + 6). The 5th minute Apgar was greater than or equal to 7 in 92.5% of the cases. Among the complications during gestation, we observed: the patient with aortic coarctation required surgical correction at 10 weeks’ gestation, presenting good evolution and full term delivery. One patient with Ebstein’s anomaly required electrical cardioversion twice because of the arrhythmia. Only one child presented congenital heart disease with non-Ebstein tricuspid valve dysplasia in a mother with Tetralogy of Fallot. There was a need to interrupt pregnancy at 13 weeks in a patient with severe pulmonary hypertension and Eisenmenger. We had 2 patients with Noonan syndrome with severe pulmonary stenosis and 4 patients with Marfan syndrome with aorta dilatation. Regarding anesthesia, we obtained 10 general anesthesia due to maternal pathology (20.8%).

Conclusions
For a long time, pregnancy was prohibitive for cardiac patients. However, with the advancement of diagnostic, therapeutic and surgical methods, pregnancy in these patients became viable, presenting good gestational results. The values of gestational age at birth, weight of newborn and Capurro obtained are within the values of normality, resembling the results of patients without congenital heart diseases. Therefore, there is a great need to accompany these patients, guiding them on the risks of pregnancy and maternal life expectancy.

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1. Emily Gelson, E; Johnson, M. Effect of maternal heart disease on Pregnancy outcomes

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