

ACHA 2024 Research Grant Award

Providers Involved: Nicole Herrick, MD (Fellow) and Anushree Agarwal, MD (Board Certified ACHD Provider), University of California San Francisco

Title: *Understanding Peripartum Arrhythmia in Women with Congenital Heart Disease*



Congenital heart disease (CHD) affects approximately 1% of the population and comprises an increasing portion of adult cardiovascular disease. With advances in medical care, many women with CHD are reaching reproductive age and desire safe and successful pregnancies. While pregnancy in women with CHD is generally well tolerated, it is not without risks. Arrhythmia is one of the most common cardiac complications encountered during pregnancy in this population.

Several smaller studies have reported that arrhythmia is a frequent complication for women with CHD during pregnancy, affecting 12-25% of women with CHD, depending on their structural complexity. However, there is a paucity of data regarding the specific types of arrhythmias and associated symptomatology in this population.

The purpose of this study is to bridge this knowledge gap by conducting a comprehensive evaluation of peripartum arrhythmias in women with CHD. Using ambulatory electrocardiogram (ECG) monitors during pregnancy and postpartum, we aim to characterize not just the presence or absence of arrhythmia but the specific arrhythmia types, duration, and associated symptoms.

Understanding the nuances of peripartum arrhythmias in women with CHD is crucial for optimizing maternal and fetal outcomes. It has been hypothesized that the development of arrhythmia is an early marker for more severe cardiac complications during and after pregnancy. By elucidating the specific type and frequency of arrhythmias, as well as the clinical manifestations, this study aims to inform risk stratification, guide management strategies, and improve the overall care of women with CHD who experience pregnancy.