

Study finds most fetal congenital heart block screening fails to meet guidelines

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New research presented this week at ACR Convergence 2022, the American College of Rheumatology's annual meeting, found that most echocardiography screening for fetal congenital heart block in anti-Ro-

and anti-La-positive pregnancies did not follow recommended guidelines in one academic medical center.

Maternal anti-Ro/SSA and anti-La/SSB antibodies are associated with congenital heart block (CHB), a rare condition marked by damage to fetal cardiac conduction tissues and subsequent inflammation and fibrosis of the atrioventricular (AV) node. Conduction abnormalities are categorized as first- second- or third-degree heart or AV block. Third-degree block is the most severe type and may not be reversible. Because early detection may improve outcomes, best-practice guidelines recommend [screening](#) with serial [echocardiography](#) starting at 16 to 18 weeks of [pregnancy](#) or gestational age.

Researchers undertook this study to determine whether people with anti-Ro- and anti-La-positive pregnancies at their institution were undergoing their first fetal echocardiography according to current recommendations—the first study to do so.

Using a detailed electronic database, they retrospectively identified all pregnant patients undergoing fetal echocardiography for CHB screening or diagnosis from 2013 to 2021 at the McGill University Health Centre. They also estimated gestational age at the first and last fetal echocardiography and at the time CHB was detected.

There were 44 pregnancies, including three sets of twins. The majority of fetuses (98%) were exposed to anti-Ro antibodies, 39% to anti-La antibodies, and a small number to both.

The mean gestational age at the first fetal echocardiography was 20.4 weeks, with 32% performed at 18 weeks or less, 55% at less than 20 weeks and 91% at less than 22 weeks. Four fetuses had only one echocardiography, two due to delayed first screening and two due to pregnancy loss.

Over the study period, CHB was detected in three fetuses, all on their first echocardiography at 19.0, 22.4 and 23.4 weeks, respectively. Two other cases were discovered incidentally. Only one fetus reversed from third-degree to first-degree AV block after treatment with dexamethasone. The rest remained in third-degree AV block throughout the pregnancy.

"We were very surprised to see that most fetal echocardiography screening for CHB in anti-Ro and anti-La pregnancies did not occur by the recommended 16 to 18 weeks of GA. We observed that only 32% of echocardiography screenings were performed at less than 18 weeks, which is the recommended initial time window to start screening," says Amanda Ohayon, a Master of Science student in [experimental medicine](#) at McGill University in Montreal and the study's lead author.

"We were also surprised to see that all CHB cases identified by screening were detected at the first echocardiography. We will further study this issue to understand potential barriers to timely screening and find solutions to optimize screening," Ohayon says, noting that COVID-19 may have contributed to some screening delays and she and her colleagues intend to compare the timing of screening before and after the start of the pandemic.

"In the future, we should also determine if other approaches—for example, home monitoring with fetal Doppler or novel biomarkers—could lead to better detection of pregnancies at high risk of developing complete CHB," Ohayon says.

The study's main limitation is that it involves a single center. Still, Ohayon says the study findings "should prompt clinicians to revisit their practice, determine if the same care gap is occurring at their institution and if so, establish strategies to ensure there is timely screening of pregnant women with anti-Ro [and anti-La antibodies]. In addition,

[healthcare professionals](#) should determine if these mothers and their families face any problems in accessing appropriate screening. Our findings highlight the need for further studies to address these issues."

More information: [Conference abstract](#)

Conference: www.rheumatology.org/Annual-Meeting

Provided by American College of Rheumatology

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