

## Screening for Fetal Heart Block in Patients with SSA/SSB Antibodies

May 2024

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Patients with Anti-SSA and Anti-SSB antibodies are at risk of delivering an infant with fetal heart block due to transplacental passage of antibodies that cause inflammation and scarring to the cardiac conduction system. Once a 3<sup>rd</sup> degree heart block is diagnosed, it is irreversible and associated with significant morbidity and mortality risks. It has been historical practice to perform serial echocardiograms on these patients to assess fetal PR interval to detect 1<sup>st</sup> or 2<sup>nd</sup> degree heart block, and if found, initiate steroid treatment to prevent progression to complete heart block. However, studies demonstrate that prolongation of the PR interval is rare, and many cases of complete heart block occur without a graded progression through 1<sup>st</sup> and 2<sup>nd</sup> degree block. Furthermore, studies have been inconclusive on the benefit of treatment with steroids and demonstrated potential risks.

This data led the Society of Maternal Fetal Medicine (SMFM) to release recommendations related to screening for heart block and possible interventions in March 2023, which were endorsed by the American College of Obstetricians and Gynecologists. SMFM states:

*“The utility of screening for or treating heart block remains unproven because early-stage heart block does not predictably progress to more advanced heart block, and interventions have not been shown to prevent progression or improve outcomes. We recommend that steroids not be routinely used for the treatment of fetal heart block due to anti-SSA/SSB antibodies given their unproven benefit and the known risks for both the pregnant patient and fetus. Furthermore, given the lack of an effective intervention, and the criteria that screening tests are only useful if effective interventions exist, the rationale for screening for early-stage fetal heart block in patients with anti-SSA/SSB antibodies is uncertain. Accordingly, we recommend that serial fetal echocardiograms for assessment of the PR interval not be routinely performed in patients with anti-SSA or anti-SSB antibodies outside of a clinical trial setting.”*

The risk for complete heart block in a patient with SSA/SSB antibodies is approximately 2% and increases to 15-20% for women with a prior affected infant. In addition, studies demonstrate decreased recurrence risk of heart block with hydroxychloroquine (Plaquenil) therapy in subsequent pregnancy.

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### Guidelines to Follow:

- **Patients with SSA/SSB antibodies who do not have prior child affected by heart block:**
  - Patients will undergo MFM counseling on risks for neonatal lupus erythematosus and fetal heart block
  - Patients will not be offered PR interval screening or steroids for prevention of fetal heart block
  - Recommend serial assessment of fetal heart rate by Doppler at least every 2 weeks between 16-28 weeks to detect complete heart block
- **Patients with SSA/SSB Antibodies AND a prior infant with heart block:**
  - Patients will undergo MFM counseling on risks for neonatal lupus erythematosus and fetal heart block
  - Patients will be offered serial echocardiograms for PR interval measurement weekly from 16-28 weeks
  - Hydroxychloroquine (Plaquenil) therapy is recommended starting as early as possible in pregnancy, ideally < 10 weeks

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### References

Society for Maternal-Fetal Medicine (SMFM). Electronic address: pubs@smfm.org; Silver R, Craigo S, Porter F, Osmundson SS, Kuller JA, Norton ME. Society for Maternal-Fetal Medicine Consult Series #64: Systemic lupus erythematosus in pregnancy. Am J Obstet Gynecol. 2023 Mar;228(3):B41-B60. doi: 10.1016/j.ajog.2022.09.001. Epub 2022 Sep 6. PMID: 36084704.

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**Authors:** MFM Division **Corresponding Member:** Michael Krew MD, MS, FACOG

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