The effect of hydroxychloroquine therapy on pregnancy outcomes and fetal heart in mothers with positive anti-SSA or anti-SSB antibodies

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Objective
Maternal anti-SSA or anti-SSB antibodies can associate with poor pregnancy outcomes and fetal congenital heart block (CHB). The purpose of the study is to compare the types and levels of maternal antibodies, the manifestations of the fetal heart and pregnancy outcomes in maternal positive anti-SSA or anti-SSB antibodies with or without Hydroxychloroquine therapy.

Methods
Mothers with positive anti-SSA or anti-SSB antibodies were selected from Jan 2016 to Nov 2018. They were divided into two groups according with (Group A) or without (Group B) Hydroxychloroquine therapy during gestation. Cases in group A (n=91) were screened fetal echocardiography from gestational weeks 16-28. Cases in group B (n=19) were diagnosed because fetal CHB or endocardial fibroelastosis (EFE) as the first manifestations in fetal echocardiography. All cases were performed fetal echocardiography in detail, the types and levels of maternal antibodies, the manifestations of the fetal heart and pregnancy outcomes were compared between the two groups.

Results
(1) At examination, there was no significant difference in maternal ages, but the gestational age was significantly smaller in Group A (20.3±3.8ws vs 25.2±3.7ws, p<0.05); (2) The types of the antibodies were not different between the two groups, but the antibodies levels were significant higher in Group B (p<0.05); (3) Eight cases (8.8%) in group A had poor pregnancy outcomes, including 1 (1.1%) with AV prolongation (AV>140ms) in fetal heart, 7 (7.7%) with non-cardiac events. While in Group B, all 19 fetuses had CHB or EFE, 15 (78.9%) of them terminated pregnancy. Four fetuses were born with one of them implanted permanent pacemaker because of three degree atrioventricular block.

Conclusion
Maternal anti-SSA or anti-SSB antibodies can associate with poor pregnancy outcomes. The fetal cardiac events are lighter with Hydroxychloroquine therapy and have good prognosis than non-therapy.