A204 DEVELOPMENT OF HEART BLOCK IN SSA/SSB AUTOANTIBODY-POSITIVE PREGNANCIES IS ASSOCIATED WITH MATERNAL AGE AND DISPLAY A SEASON-OF-BIRTH PATTERN

Aurélie Ambrosi,[1] Stina Salomonsson,[1] Håkan Eliasson,[1] Elisabeth Zeffer,[1] Vijole Dzikaite,[1] Gunnar Bergman,[1] Eva Fernlund,[2] Elke Theander,[3] Annika Rydberg,[4] Thomas Skogh,[5] Solveig Wållberg-Jonsson,[4] Annika Öhman,[6] Ulla Lundström,[7] Mats Mellander,[7] Ola Winqvist,[1] Michael Fored,[1] Anders Ekbom,[1] Lars Alfredsson,[1] Henrik Källberg,[1] Fredrik Gadler,[1] Anders Jonzon,[6] Sven-Erik Sonesson,[1] Marie Wahren-Herlenius[1] *[1]Karolinska Institutet, Stockholm, Sweden; [2]Skåne University Hospital, Lund, Sweden; [3]Skåne University Hospital, Malmö, Sweden; [4]Umeå University Hospital, Umeå, Sweden; [5]Linköping University, Linköping, Sweden; [6]Uppsala University, Uppsala, Sweden; [7]The Queen Silvia Children's Hospital, Sahlgrenska University Hospital, Göteborg, Sweden*

10.1136/ard.2010.149021.14

Background and objectives Congenital heart block (CHB) may develop in the fetus of anti-Ro/SSA and anti-La/SSB positive mothers. Reported recurrence rates of only 10–20% despite persisting maternal antibodies indicate that additional factors are critical for establishment of the heart block. The authors therefore investigated the influence of other maternal and fetal factors on heart block development in a Swedish population-based cohort.

Material and methods The influence of fetal gender, maternal age, parity and time of birth on heart block development was analysed in 145 families including Ro/La-positive (n= 190) and Ro/La-negative (n=165) pregnancies.

Results The authors observed a recurrence rate for heart block of 12.1% in Ro/La-positive women, and no recurrence in Ro/La-negative women. Fetal gender and parity did not influence the development of heart block in either group. Maternal age in Ro/La-positive pregnancies with a child affected by heart block was however significantly higher than in pregnancies resulting in babies without heart block ($p<0.01$). Seasonal timing of pregnancy appeared to be an important factor in pregnancy outcome in Ro/La-positive women as the ratio of affected to healthy births in the summer (June–August) was significantly different from the rest of the year, corresponding to a higher proportion of children with heart block born in the summer compared to the rest of the year. This in turn corresponds to a higher proportion of affected pregnancies for

which the susceptible gestational weeks 18–24 occur during the late winter (January–March). Maternal age or seasonal timing of pregnancy did not affect the outcome in Ro/La-negative pregnancies.

Conclusions This study identifies maternal age and seasonal timing of pregnancy as novel risk factors for CHB development in Ro/La positive pregnancy. These observations will be important for counselling when a pregnancy is considered.