Background Systemic Lupus Erythematosus (SLE) affects mostly women in childbearing age. Modern management of SLE patients has improved the pregnancy outcomes over the last decades. However, there is still an increased risk of maternal, fetal and neonatal complications. In this longitudinal follow-up of pregnant women affected by SLE, we aimed to investigate which clinical and immunological features may predict for the occurrence of adverse pregnancy outcomes (APOs).

Methods We investigated the outcome of 59 pregnancies in 28 SLE patients who have had one or more pregnancies, between 2002 and 2018. Longitudinal clinical and laboratory data from rheumatology, obstetrics and neonatal units were collected and analyzed. We assessed the association between the presence of SLE-related clinical and immunological features and the occurrence of adverse pregnancy outcomes.

Results We recorded 52 APOs in 18 (64.3%) patients. The 59 investigated gestations resulted in 44 (31 vaginal and 13 C-sections) deliveries, 8 (18.2%) before the 37th gestational week, 13 (22%) early miscarriages and 2 (3.4%) induced abortions. HELLP syndrome and preeclampsia complicated 1 (2.3%) and 11 (25%) gestations, respectively. Moreover, 10 (22.7%) newborns had low birth weight, 5 (11.4%) fetuses had intra-uterine growth restriction, whereas 1 (2.3%) resulted in small for gestational age neonate. Neonatal lupus occurred in 1 (2.3%) baby. Previous lupus nephritis was associated with higher risk of APOs overall (OR=5.9, p=0.01), in particular impaired fetal growth (OR=16.6, p=0.01). The presence of anti-phospholipid antibodies was also associated with higher risk of APOs overall (OR=4.5, p=0.01). In particular, the occurrence of preterm delivery and the incidence of miscarriage were associated with the presence during pregnancy of anti-cardiolipin antibodies (OR=6.8, p=0.03) and with concomitant anti-phospholipid syndrome (APS) (OR=3.3, p=0.04), respectively.

Conclusions Several different APOs occur in the majority of SLE-patients, in particular those with renal involvement, APS and presence of anti-phospholipid antibodies.
Materials and Methods We performed a prospective study of a SLE pregnant cohort. All patients were evaluated and followed with the same clinical protocol in a multidisciplinary care unit (internal medicine, gynecology, hematology, nephrology) from January 2008 to December 2018. Clinical and laboratory data were collected in a preformed clinical record registry.

Results Seventy pregnancy (67-women) with a medium age of 26 (16–41) years old were included. Before pregnancy SLE involvement was: cutaneous (75%), joint (65%), hematological (41%) and renal (40%) (Type -WHO- 1:2/II:9/III:3/ IV:5/V:9). Eleven patients had carried out a preconception counseling. Median time between SLE onset and pregnancy was 6 (1–25) years. At the beginning of the follow-up, disease was active in 15.7% and status of antibodies was: persistently positive antiphospholipid: 32.8%, anti-SSA/Ro: 24%, anti-SSB/La: 10%. Mycophenolate, enalapril and warfarin treatment was suspended at the first visit. During pregnancy treatment included: corticosteroids (63%), azathioprine (43%), hydroxychloroquine (97%), low-molecular-weight-heparin (48%) and low-dose aspirin (74%). Thirty-two patients had SLE-flare and 19 (27%) preeclampsia. Preterm delivery (PD) was 42.9%. SLE-flare during pregnancy was associated with PD (p=0.00) and preeclampsia (p=0.04). Lupus nephritis (regardless of activity) was associated with PD (p=0.00) and preeclampsia (p=0.03). Forty-five women had a cesarean section and 37% of them were admitted with preterm labor. Median gestational age at birth was 37±5 weeks and median birth weight was 2770 (710–4315) gr. There were two fetal deaths, two abortions and no maternal deaths.

Conclusion We present the first report of pregnancy outcomes of lupus patients in Uruguay. We highlight the low rate of complications, fetal and maternal death. It is possible that close, protocolized and multidisciplinary follow-up have a positive influence in these good results.

Patients with SLE had more frequent C allele compared to controls (20% vs 13%, P = 0.041).

However, the allele and genotype frequencies did not show any difference in patients with nephritis in comparison to those without nephritis.

Conclusion The rs729302 C allele and AC genotype can be considered as risk factors for the development of SLE in Algerian patients.

Abstracts

THE IRF5 (RS729302) POLYMORPHISM IS A GENETIC RISK FACTOR FOR SYSTEMIC LUPUS ERYTHEMATOUS IN ALGERIAN PATIENTS

Ines Allam, 1Aldjia Lamri, 2Sihem Oulacrouz, 3Mohamed Saidani, 1Reda Djidjik. 1Dept. of Immunology, Beni Messous Hospital, Algiers; 2Dept. of nephrology, Beni Messous Hospital, Algiers, Algeria

Background Interferon regulatory factor 5 (IRF5) is a transcription factor regulating interferon secretion and was proved to be implicated in the pathogenesis of systemic lupus erythematosus (SLE) in several studies. The purpose of this case-control study was to investigate whether IRF5 gene polymorphism is involved in the genetic predisposition to SLE in the Algerian population.

Methods IRF5 rs729302 (A/C) polymorphism was analyzed in 120 SLE patients and 98 age and sex matched controls by real time- polymerase chain reaction.

Results Significant association was observed for AA and AC genotypes of IRF5 between patients and healthy subjects (60% vs 73%; 40% vs 27%, p =0.025, respectively).