

Long term cardiovascular risk after pregnancies complicated by systemic lupus erythematosus

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Objective. Systemic lupus erythematosus (SLE) may significantly affect pregnancy. Preeclampsia and SGA/FGR, frequently observed in SLE pregnancies, are risk factors for cardiovascular disease (CVD) later in life. The present study aims to investigate the long-term cardiovascular outcome after pregnancy complicated by preeclampsia/FGR/SGA in women with SLE.

Materials and Methods. Secondary prospective analysis of a single centre cohort of pregnancies affected by SLE between 2007 and 2022. Years after pregnancy, we recalled the cohort for an USCOM prospective project and collected data on CVD, thrombosis/stroke, fasting glucose, cholesterol, metabolic syndrome, triglycerides, creatinine > 1.20 mg/dL and/or proteinuria. The association between these variables and the history of preeclampsia/FGR/SGA was analysed both with ANOVA and linear regression.

Results. Out of 110 participants enrolled, 60 accepted to be recalled and 6 were excluded for incomplete dataset (final cohort = 54). 13-2 years after pregnancy, CVD prevalence was 22.2%, chronic hypertension affected 26% of women, presenting after pregnancy in 9 cases (pPH, 64%).

Linear regression showed a significant association between CVD *vs* FGR/SGA (18.5%, $p = 0.025$) and CVD *vs* post pregnancy hypertension, pPH ($p = 0.001$). pPH was also associated with preeclampsia (13%, $p = 0.005$), and CVD with the risk of thrombosis/stroke (13%, $p = 0.001$). Serum creatinine was associated with CVD in ANOVA ($p = 0.03$) but not in the regression analysis ($p = 0.4$).

Conclusions. SLE is a known risk factor for CVD later in life, but particularly in women who have experienced preeclampsia and FGR/SGA in pregnancy. Preeclampsia is associated with the development of hypertension in pregnancy and the consequent risk of CVD/thrombosis.