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12. Time to Pregnancy in Women with Systemic Lupus Erythematosus

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Objectives: Women diagnosed with systemic lupus erythematosus (SLE) during the reproductive period have fewer children than unaffected women. Multiple disease-related factors might influence family size in SLE women, including impaired fertility. However, until now, no one has assessed if women with SLE have a prolonged time to pregnancy (TTP), which is a validated measure of fertility. Therefore, we aimed to measure TTP in women with SLE of reproductive age and compare the occurrence of delayed TTP (i.e. ≥ 12 months) to general population figures.

Method: Female subjects with SLE from the Montreal General Hospital Lupus Clinic, aged 18-45 years, were enrolled between 2012 and 2017. SLE diagnosis was defined in accordance with the American College of Rheumatology classification criteria for SLE. At baseline and annual follow-up visits, the investigators administered a detailed reproductive questionnaire, wherein the TTP was measured. The TTP was assessed retrospectively for all pregnancies occurring prior to the baseline visit and prospectively for all pregnancies occurring over the follow-up period. Disease damage index [i.e. SLICC damage index (SDI) score] and the mean disease activity (i.e. SLEDAI score) were recorded, as well as previous cyclophosphamide (i.e. ever/never) and other relevant drug exposures. Descriptive statistics were calculated.

Results: A total of 333 women with SLE completed the questionnaire. Among these women, 135 never had a pregnancy and 198 conceived at least once. In women having ≥ 1 pregnancies, we identified 400 pregnancies for which the TTP was assessed. The TTP was measured retrospectively in 347 pregnancies, of which 226 and 121 respectively occurred prior and after SLE diagnosis. We observed a TTP ≥ 12 months in 4.9% (95%CI 2.6,8.8) of pregnancies occurring prior to diagnosis and in 9.1% (95% CI 4.9, 16.0) of pregnancies after diagnosis.

43 pregnancies occurred over the study period and 11.6% (95%CI 4.4,25.9) had a TTP ≥ 12 months. None of the women with prolonged TTP had prior cyclophosphamide exposure nor were exposed to steroids while attempting to conceive. However, they tended to be slightly older (median 33 vs 31 years) and more likely to have a SDI ≥ 1 [60% (95%CI 17,92) vs 28% (95%CI 14,47)] compared to women with TTP < 12 months.

Conclusion: Our findings suggest that the occurrence of delayed TTP after SLE diagnosis is approximately 10%, similar to that of the general population. Interestingly, the TTP delay occurred in fewer pregnancies that occurred prior to SLE, versus after. The limitation of our study is that much of our data was retrospectively collected. Larger observational studies, including notably an unexposed group of women without SLE, are needed to confirm our results.