

## **KRA Lupus Pregnancy Cohort**

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Pregnancy in lupus has been a focal point of research over the past few decades, particularly with the advent of more effective therapeutic options. However, there remains a paucity of data from India, with most available studies originating from teaching institutions where more severe or complicated cases are typically referred.

We conducted an ambi-directional study, gathering data from five multi-specialist referral centers across the state of Karnataka, India, over a five-year period (2013-2018). Clinical details of pregnancies and outcomes temporally associated with lupus were meticulously recorded using a structured proforma. To assess lupus activity, the Safety of Estrogen in SLE National Assessment-SLE Disease Activity Index (SELENA-SLEDAI) was employed, capturing disease activity during the six months preceding pregnancy as well as during the intrapartum and postpartum periods.

A total of 121 pregnancies in 80 SLE patients with a mean age of 27.1 ( $\pm 4.5$ ) years and with a mean disease duration of 4.6 ( $\pm 4.1$ ) years were reviewed. Largely patients were in clinical remission (109/121; 90.1%). Antiphospholipid antibody positivity was seen in 45/121 (37.2%) patients. A history of lupus nephritis was noted in 29/121 (24%) patients. Maternal complications (32%) were mainly due to hypertensive disorders of pregnancy (HDP; 19/121; 15.7%). Adverse fetal outcomes (58%) were mainly in the form of spontaneous first-trimester abortions (21/121; 16%), stillbirth (14/121; 11.6%) and prematurity (24/121; 20%). HDP was strongly associated with stillbirth and prematurity and is independent of active lupus. Disease activity was associated with a three-fold increased risk of adverse fetal outcome in univariate analysis. The risk of major flare during pregnancy is low (4.1%) when conception occurs during stable disease. Hydroxychloroquine (HCQ) use was associated with reduced risk of flare among patients in remission at the time of conception.

#### **Difficulties and future direction:**

The absence of an age-matched control population in the study posed a significant limitation during analysis, necessitating comparisons with national statistics, which is not ideal for precise assessments. Additionally, the retrospective nature of the data collection further constrained the accuracy and detail of reported complications, limiting the study's overall robustness.

In the future, if a prospective registry or cohort-based study on lupus pregnancies and their outcomes is planned, it would be ideal to simultaneously collect data on pregnancies from an age-matched control population at the respective centers. This approach would enhance the comparability and validity of the study findings.

**Citation for manuscript:**

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