diagnosis of SLE, and had active disease involving skin or joints. RNA isolated from whole blood at baseline and weeks 2, 4, 12, and 24 was analyzed using Affymetrix HTA2.0 array.

Results Gene expression profiling demonstrated a statistically significant elevation of STAT1 and STAT2 gene expression at baseline in SLE patients. There was a significant association between the overexpression of STAT1 and STAT2 at baseline. Baricitinib 4-mg treatment resulted in modest reduction in STAT1, STAT2, and STAT4 expression, and a statistically significant reduction in multiple genes downstream of STAT1, STAT2, and STAT4. The reduction in expression of STAT-associated genes with baricitinib treatment correlated with clinical improvement in SLE patients using SLEDAI-2K measurements (table 1).

Conclusions Baricitinib may partially mediate its effect in SLE through changes in STAT-related gene expression, with changes associated with clinical improvement in SLE.

Acknowledgements Funded by Eli Lilly and Company.

Background Some countries face restrictions to prescribe Chloroquine (CQ) and Hydroxychloroquine (HCQ) during pregnancy, due to report of ocular toxicity in rodents and potential genotoxicity. The aim of this study was to perform a systematic literature review (SLR) and a meta-analysis of fetal malformation rates under CQ and HCQ (all indications) during pregnancy.

Methods Two independent reviewers searched literature from inception to September 2019 (via Pubmed, Embase and abstracts from ACR and EULAR congresses) for studies that compare fetal malformation rates and pregnancy outcomes of CQ/HCQ versus placebo. A meta-analysis was performed to estimate a global risk difference for malformation rate and pregnancy outcomes, considering a p-value threshold of 5%.

Results From 2835 articles, the literature search revealed 127 articles and abstracts of interest. For the fetal malformation safety analysis, we identified 16 studies fulfilling required criteria. Selected articles include a total of 2068 exposed children of mothers treated by CQ/HCQ for autoimmune diseases or malaria indication, compared to 16294 children in control group. The meta-analysis did not show any differences of malformation rate under CQ and HCQ (all indications) during pregnancy. In the subgroup of patients suffering from systemic lupus erythematosus (SLE), we performed an analysis of CQ and HCQ efficacy on maternal-fetal outcomes.

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