Background and aims To observe the effects of long term hydroxychloroquine treatment on blood lipid and left ventricular function of systemic lupus erythematosus (SLE) patients.

Methods 72 patients with SLE were randomly divided into two groups: Hydroxychloroquine treatment group (n=36) and non-hydroxychloroquine group (n=36). The level of blood lipid, left ventricular end-diastolic diameter (LVEDD), left ventricular end-systolic diameter (LVESD), interventricular septum thickness (IVST), left ventricular posterior wall thickness (LVPWT), fractional shortening rate (FS), left ventricular ejection fraction (LVEF), E/A were measured before, 6 month, 12 month and 2 years after the treatment.

Results The long term applies of hydroxychloroquine can bring statistically different of TC, TG, LDL and HDL to SLE patients. LVEDD, LVWPT and E/A were statistically different (p<0.05) before and after hydroxychloroquine were used.

Conclusions The long term application of hydroxychloroquine can improve the lipidic metabolism and left ventricular function in SLE patients.