Background and aims Nowadays the importance of antimalarials, especially hydroxychloroquine (HCQ) and chloroquine (CQ), in treatment of systemic lupus erythematosus (SLE) has been demonstrated. However, few have examined the efficacy of HCQ and CQ on eastern Chinese SLE patients.

Methods The analysis is based on 1372 patients who were enrolled in a retrospective study of 26 centres from January 1st, 1999 through December 31st, 2009, during which time is their first hospitalisation. Baseline and follow-up clinical, laboratory and therapeutic data and survival status before April 30th, 2015 were recorded. Statistical analysis consist of Chi-squared test, t-test, Kaplan-Meier curves and logrank test.

Results Compared with 562 patients without HCQ or CQ treatment, the hazard ratio (HR) of deaths in 810 patients taking those was reduced (HR 0.52, 95% CI 0.38–0.70, p<0.001). 376 of these 1372 patients experienced their second hospitalisation, during which treating group (165 of 376) showed high blood level of total cholesterol (TG), compared to control group (4.47 (0.13) vs 5.03 (0.21), p=0.027), while no statistical difference of TG exists between the two groups’ first hospitalisation (p>0.05). Other metabolic data, such as systolic and diastolic blood pressure, fasting blood sugar, triglyceride and uric acid were similar between the two groups in two times of hospitalisation. On second inpatient visit, disease activity (SLE disease activity index, blood sedimentation rate, complement) and organ involvements of antimalarials takers and no users showed no significant differences either.

Conclusions Use of HCQ or CQ lower the risk of mortality and TG levels of eastern Chinese SLE patients.