treatment withdrawal is contemplated. Until improved blood or urine biomarkers have been developed, repeat biopsy will remain a useful tool for the clinic.

REFERENCES

Oral presentations

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<th>O1</th>
<th>HYDROXYCHLOROQUINE BLOOD LEVELS AND RISK OF THROMBOTIC EVENTS IN SYSTEMIC LUPUS ERYTHEMATOSUS</th>
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<td>Maximilian F. Koning, Jessica Li, Michelle Petri. Medicine, Rheumatology, Johns Hopkins University School of Medicine, Baltimore, USA</td>
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<td>10.1136/lupus-2020-eurolupus.15</td>
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Background Hydroxychloroquine (HCQ) has a primary role in the treatment of systemic lupus erythematosus (SLE). Beyond its pleiotropic immunomodulatory effects on TLR and type I interferon signaling, HCQ use has been found to be protective for thrombosis in SLE. Optimal dosing of HCQ in SLE is unknown. The longitudinal measurement of HCQ blood levels may provide an opportunity to individualize weight-based dosing strategies and reduce risk of toxicity. We examined the association of HCQ blood levels with thrombotic events in a longitudinal SLE cohort.

Methods 812 SLE patients with HCQ level measured prior to the thrombosis were included: 93% female, 43% African-American, 46% Caucasian. HCQ blood levels were quantified by liquid chromatography-tandem mass spectrometry. Mean HCQ blood levels (± SD) over all cohort visits prior to occurrence of thrombosis were calculated for each patient. Thromboses were defined as venous (DVT/PE or other venous) or arterial thrombosis (stroke, myocardial infarction, digital gangrene or other arterial).

Results Thrombosis had occurred during prospective follow up in 44 patients (5.4%), venous in 3.0% and arterial in 2.5%. Lupus anticoagulant was strongly associated with a history of any thrombosis (OR 3.25, 95% CI 2.23–4.78) and arterial thrombosis (OR 3.08, 95% CI 2.02–4.71). A prospective analysis shows that for any thrombosis and for venous thrombosis, the HCQ blood level was significantly lower. Higher prescribed doses of HCQ (as opposed to HCQ blood levels) were also associated with decreased odds of any thrombosis and venous thrombosis in a separate cross-sectional analysis (OR 0.88, 95% CI 0.82–0.95) and arterial thrombosis (OR 0.83, 95% CI 0.77–0.89), respectively for each 1 mg/kg increase in prescribed HCQ.

Conclusions HCQ blood levels are inversely associated with risk of any thrombosis and of venous thrombosis in patients with SLE in a prospective analysis. Reduction of HCQ dosing, as suggested by the American Academy of Ophthalmologists, could reduce or eliminate the benefit of hydroxychloroquine to prevent thrombosis.

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