### Invited talks

**11 WHY SHOULD ALL PATIENTS TAKE HYDROXYCHLOROQUINE?**

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**Background** Hydroxychloroquine (HCQ) has been used in the therapy of SLE for more than 50 years. The importance of this drug has been increasingly recognised within the last 10 years.

**Methods** A critical review of the literature as well as the author’s point of view will be offered.

**Results** Recent studies have confirmed the effects of HCQ in improving survival, decreasing SLE flares, reducing damage accrual and infections. In addition, beneficial effects in pregnant women include a reduction in preterm delivery and fetal growth restriction, as well as a reduction in the risk for cardiac neonatal lupus in babies born to anti-Ro-positive mothers. The addition of Mepacrine to therapy including HCQ has proven very effective in SLE patients with refractory skin and/or arthritic activity.

The risk for serious side effects is low even after prolonged use of the drug. Maculopathy is the most feared side effect of HCQ. The recent availability of sensitive screening techniques (particularly, the spectrum domain-optic coherence tomography, or SD-OCT) help capture cases of early (i.e. reversible) toxicity, but also increases the probability of discontinuation of the drug. Recent guidelines suggest that daily doses >5 mg/kg/d of HCQ are the main predictor of toxicity. Some authors have questioned this recommended reduction of the usual dose and the utility of blood levels of HCQ to predict retinal toxicity has also been proposed.

In the author’s experience, doses of 200 mg/d are sufficient for the majority of patients. Indeed, in our cohort studies showing protection of HCQ against thrombosis, infections, cancer and improved survival, most patients were treated with 200 mg/d, which reassures the efficacy of such doses.

**Conclusions** HCQ is the background therapy of SLE and should be recommended long-term in all patients without contraindications. Doses of 200 mg/d are effective and safe and should be considered the standard of care. The addition of Mepacrine potentiates the effects of HCQ in patients with non-responsive skin and/or arthritic activity. HCQ must not be stopped during pregnancy. Screening for retinal toxicity using sensitive techniques, including SD-OCT must be assured following recent recommendation. In addition, it is very important that a skilled and experience team of ophthalmologists, in close contact with lupus doctors, take care of the screening, in order to avoid unnecessary discontinuations of this essential drug.

**12 HOW TO OPTIMIZE USE OF GLUCOCORTICOIDS IN SLE**

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**Background** Glucocorticoids (GC) are a mainstay therapy for disease activity in Systemic lupus erythematosus (SLE) patients. In addition to induction of remission, many SLE patients receive long-term maintenance treatment with GC. On the reverse side, it is well established that GC use results in important adverse effects that are directly proportional to the dose and duration of GC treatment. These includes increased risk of infections and accrual of irreversible organ damage, that are major contributors to the morbidity and mortality of SLE patients. Hence, risk-benefit must be carefully considered for optimal use of GC and improve outcomes of SLE patients.

However, evidence base is still scarce for establishing standardized approaches to GC initiation, tapering and withdrawal for optimal management of SLE. As a result, clinical practice regarding use of GC in the treatment of SLE patients is wildly heterogeneous.

**Methods** This review will focus on evidence and recommendations to optimize use of GC, which is a critical unmet need in the management of SLE.

**Results** Induction treatment of moderate and severe inflammatory lupus manifestations is the major indication for GC in SLE. In patients with milder manifestations, such as localized mucocutaneous lesions, arthralgias and mild cytopenia, hydroxychloroquine is the mainstay of treatment and use of systemic GC might not be needed. Common mild complaints, including arthralgia, myalgia, fatigue, headache or mild cognitive symptoms can be frequently due to non-inflammatory comorbidities, that must be differentiated from lupus flares and do not benefit from GC treatment. In treat-to-target strategy for SLE management, tapering of GC to ≤7.5 or preferably ≤5 mg/day of prednisone is an important objective, as it is associated with improved outcomes. Use of low dose prednisone in maintenance treatment of SLE patients is controversial. A recently published clinical trial showed that in SLE patients with quiescent disease, withdrawal of 5 mg/day of prednisone was associated with an increased risk of flare, however there was no significant difference in the risk of severe flares.

**Conclusions** Minimization of exposure to GC, along with achieving a stable remission or at least a low disease activity state are central targets in the management of SLE. For this purpose, it is fundamental a judicious use of GC for treatment of disease activity, and to optimize use and adherence to hydroxychloroquine and immunosuppressant therapy in order to achieve successful tapering and whenever possible the withdrawal of GC.

**13 USING PATIENT STRATIFICATION TO DEFINE GENETICS OF DISEASE**

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**Background** Systemic lupus erythematosus (SLE) is a heterogeneous disease with unpredictable patterns of disease activity measured using mostly the SLEDAI. However, patients with similar SLEDAI scores may have different prognosis and molecular abnormalities. We reported the longitudinal stratification of SLE into 3 clusters based on correlation between gene expression and SLEDAI (1). Each cluster showed differences in molecular pathways involved, clinical manifestations, and how cell populations evolved with activity. In addition we