

AB0485 **INTRAVENOUS HIGH DOSE GLUCOCORTICOIDS CAUSE PROLONGATION OF QT INTERVAL IN CONNECTIVE TISSUE DISEASE PATIENTS EXCEPT ANTI-RO POSITIVE SUBGROUP**

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Background: Recent literature indicates that anti-Ro antibodies may be associated with prolongation of corrected QT (QTc) interval in the adult patients with connective tissue diseases. Moreover, glucocorticoids (frequently used in the therapy) are known to probably induce electrocardiographic changes including prolongation of QT interval. Prolongation of QTc interval is a risk factor for malignant ventricular arrhythmias. We hypothesised that patients with anti-Ro positivity have a higher risk of QT prolongation especially in the case of high dose intravenous glucocorticoids (IVGC) treatment. **Objectives:** The aim of the study was to analyse risk of QTc interval prolongation in anti-Ro and anti-La positive patients before and after high dose IVGC treatment in patients with connective tissue diseases.

Methods: We performed a retrospective study of 115 patients (21 males), mean age of 48±14.7 years, range 19-78 years with connective tissue disease. Anti-Ro antibodies were examined in all patients before IVGC treatment. The patients were given 5x1000 mg methylprednisolon i.v. during five consecutive days. ECG recording was performed at baseline and after IVGC. The QT intervals were measured in each of 12-lead standard ECGs from two consecutive cycles. The QT intervals were measured from the onset of QRS complex to the end of the T wave by the means of a tangential method. Fridericia formula was used to obtain heart rate-corrected values for QT intervals.

Results: Comparing patients with anti-Ro positivity (n=39; 33.9%) and anti Ro-negativity (n=76, 66.1%), we found insignificant difference in QTc interval; QTcRo+ =417.2±28.4ms and QTcRo- =420.8±26.4ms (P=0.51), respectively. Admission of IVGC showed significant prolongation of QTc in all patients, mean QTc1 before treatment was 399.4±26.2ms, and QTc2 after therapy 412.7±27.2ms, P=0.00021. On the other hand, anti-Ro and anti-La positivity showed shorter QTc interval 391±18.7ms, to compare patients without these antibodies QTc=414.8±25.7ms, P=0.019 after treatment.

Conclusion: IVGC treatment significantly prolongs QT interval. Prolongation of QT over 445 ms was found in nine patients, but ventricular arrhythmias were not observed. The presence of anti-Ro and anti-La antibodies did not show QT prolongation. Therefore, shortening of QT/QTc interval needs further confirmation. Motivated by this experience, we consider ECG monitoring and careful observation of patients during IVGC treatment.

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AB0486 **LACK OF CONSISTENT STANDARD OF CARE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS IN REAL WORLD**

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Background: Current guidelines do not necessarily reflect current standard of care (SOC) or treatment patterns in SLE in real world.

Objectives: To describe SLE SOC in the EU5 and US and assess need for a more efficient and defined treatment pathway.

Methods: A cross-sectional study of 263 rheumatologists in the US and EU5. Data were collected from the Adelphi Real World 2015 Lupus Disease Specific Programme (DSP). Physicians were asked to complete patient record forms (PRFs) for the next 5 patients consulting with SLE; the same patients were asked to complete patient self-completion (PSC) forms describing how SLE affected them. PRFs collected data pertaining to the patient's diagnosis, disease history, current clinical outcomes, treatment and management history. PSCs focused on similar data collection and included patient reported outcome measures (PROs) to assess the humanistic burden. Chi-squared tests were conducted to ascertain significance.

Results: Data was extracted from 1376 PRFs, and 591 PSCs. 35.6% of patients were currently on their first line of therapy, 40.0% second line, and third line or more 24.4%. Significant differences were observed between US and EU5 in current treatment classes for first line (p<0.0001) and second line (p=0.0007). Descriptive differences were observed in the third line.

In the US monotherapy is used more often first line with antimalarial (AM) (monotherapy EU5 12.5% vs. US 19.3%) and immunosuppressant (IM) (monotherapy EU5 4.6% vs. US 11.1%). Glucocorticoids (GCS) use is higher in the EU5 at 1st line; both monotherapy (EU5 13.7% vs. US 11.8%) and combination (GCS+AM EU5 28.3% vs. US 16.7%). At second line, IM use (no bio) is higher in EU5 (EU5 64.9% vs. US 56.7%) and biologic use is higher in the US (EU5 5.0% vs. US 8.3%); GCS use is similar (EU5 19.2% vs. US 19.0%).

Globally, 84.4% of patients receiving GCS received it continuously with no significant differences observed between markets, EU5 85.5% vs. US 81.9%. A higher proportion of patients in the EU5 have been on GCS for 6 months or longer when compared to the US; EU5 79.9% vs. US 72.5%. Statistically significant differences were seen in the perception of GCS importance between markets (p=0.0004) and concerns with taking GCS (p=0.0140). A higher proportion of patients in the US regarded the use of GCS to at least be very important (very important/essential EU5 65% vs. US 80.6%). A higher proportion of patients in the US were concerned with the use of GCS (somewhat concerned/very concerned EU5 56% vs. US 61.2%).

Conclusion: Significant differences in treatment approach between regions highlights the need for a better understanding of this disparity and a united approach to SLE treatment. Despite the high profile of risk factors linked to GCS use in SLE, it continues to be a continuously utilized by a large proportion of SLE patients and there is poor use of flare preventing agents such as antimalarials. Patients and physicians recognize the role of GCS in the management of SLE but also express concerns. Impact of an update to the SLE guidelines and their dissemination with better understanding of risk benefits of GCS vs. immunosuppressive and biologic therapy is warranted.

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AB0487 **HCQ COULD ACT ON SLE PATIENTS THROUGH THE MODULATING EXPRESSION OF IL-8 ALONG WITH S100 PROTEINS**

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Background: Some reports revealed that S100A8 and S100A9 proteins were associated with disease activity of lupus nephritis(LN) [1]. However, there have been no reports about the mechanism of additional hydroxychloroquine (HCQ) treatment for systemic lupus erythematosus (SLE) patient with low disease activity.

Objectives: To clarify the mechanism of additional HCQ treatment for Japanese SLE patients with low disease activity.

Methods: All the 44 patients were enrolled in this study. These patients had been receiving additional oral HCQ sulfate continuously for at least 3 months. These patients had no need for additional immunosuppressants including glucocorticoids, during this study because of their sustained low disease activity for 3 months prior to starting HCQ. Low disease activity was defined as SELENA-SLEDAI score of 8 or less with no activity in major organ systems. As conventional immunological and clinical assessment for SLE disease activity were determined to examine the levels of complement (C3, C4, CH50), anti-dsDNA antibody, blood cell count, SELENA-SLEDAI and CLASI score. Serum levels of S100A8 and S100A9 reported as novel markers for SLE disease activity[1] were measured using ELISA (CircuLex ELISA Kit, MBL) at the time of HCQ administration as well as 3 months later. In addition, several expressions of cytokines (IFN- α , IFN- γ , TNF- α , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-17, IL-1 α , IL-1 β , IL-1ra, VEGF, GM-CSF, G-CSF, CCL2, CCL3, CCL4, CXCL) were measured by multiplex assay (Human Luminescence assay, R&D systems).