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AB0567

CLINICAL SIGNIFICANCE OF THE DETECTION OF HLA-DRB1 ALLELES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Associations between clinical manifestations of systemic lupus erythematosus (SLE), presence of antiphospholipid antibodies (aPL) and HLA-DRB1 alleles have been established, these associations however need clarification.

Objectives: Clarify the associations between clinical features of APS in patients with SLE and the presence of aPL and the HLA-DRB1 alleles.

Methods: 79 SLE patients were enrolled in the study (M/F 7/72; mean age 11.0 years, range (18,0;78,0). The main group consisted of 41 aPL carriers (28 of them with antiphospholipid syndrome (APS), a comparison group consisted of 38 aPL-negative SLE patients. The groups were comparable in age, duration and SLE activity.

ELISA was used to test for aPL. Lupus anticoagulant (LA) was evaluated using the DRVV test method. The HLA-DRB1 alleles were identified using HLA-typing.

Results: While comparing both groups, HLA-DRB1*03 allele was found significantly less frequently in aPL-carriers group ($p=0.04$). In APS group HLA-DRB1*08 allele was present significantly more often ($p=0.002$), both HLA-DRB1*03 and *15 alleles were found significantly less often ($p=0.008$) in comparison with the aPL-negative group.

SLE patients with HLA-DRB1*16 allele were more likely to develop an early pregnancy loss ($OR=19$, $p=0.04$), patient with HLA-DRB1*11 allele – more likely to develop a fetal loss ($OR=4.9$, $p=0.04$) in comparison with other alleles; in patients with HLA-DRB1*01 allele both early pregnancy loss and fetal loss occurred less often ($OR=0.18$, $p=0.04$; $OR=0.29$, $p=0.04$) compared with other alleles. The highest level of anti-double-stranded DNA was found in patients with HLA-DRB1*13 allele ($Me=54$, [17.0, 290.0 IU/ml], $p=0.005$), and lowest level – in patients with HLA-DRB1*04 ($Me=0.15$, [0.0; 14.2 IU/ml], $p=0.005$).

In the group of aPL carriers significant correlations between the HLA-DRB1*08 allele and elevated level of anticardiolipin antibodies (aCL) IgM ($r=-0.42$, $p=0.005$) and anti-annexin V antibodies IgG ($r=0.3$, $p=0.01$), between HLA-DRB1*04 allele and elevated level of aCL IgG ($r=0.31$, $p=0.008$), between the HLA-DRB1*12 allele and an elevated level of anti-annexin V antibodies IgM ($r=0.31$, $p=0.01$) were found.

Correlations between HLA-DRB1*16 allele and early pregnancy loss ($r=0.37$, $p<0.001$), between HLA-DRB1*11 allele and fetal loss ($r=0.30$, $p<0.001$) were observed.

Conclusions:

1. HLA-DRB1*08 allele is a risk factor for the development of APS in SLE patients.
2. HLA-DRB1*03 and *15 alleles were more often detected in aPL-negative SLE patients.
3. The presence of HLA-DRB1*16 and *11 alleles in SLE patients is a risk factor for the development of obstetric complications.
4. In the group of aPL carriers significant correlations between HLA-DRB1 alleles and elevated levels of aPL were found.
5. SLE patients with HLA-DRB1*01 were less likely to develop any obstetric complications.

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AB0568

KNOW YOUR VACCINES – A CLINICAL AUDIT ON THE UPTAKE OF VACCINATIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Systemic Lupus erythematosus (SLE) is a multi-system autoimmune disease with an increased mortality and morbidity rate compared to the controlled population. One of the commonest causes of mortality and morbidity in SLE is infection. This is a result of not only the immunosuppressive effect of the disease process itself but also treatment involving disease modifying anti-rheumatic drugs (DMARDs). In fact, corticosteroids and immunosuppressants increase the risk of opportunistic infection, in addition to the more common pathogens.

Vaccines provide long lasting protective immunity against microbial pathogens and prevent clinically relevant infections. Recommended vaccinations in SLE patients include H. Influenza, Pneumococcal, Hepatitis A and B, and Human Papilloma Virus (HPV). Influenza vaccines are given annually and a Pneumococcal booster dose is given at 5 years following the initial vaccine.

Objectives: To assess whether, in routine clinical practise, patients with SLE are immunised against preventable disease according to EULAR recommendations and to assess the level of patient awareness.

Methods: A questionnaire was designed to assess the degree of compliance with current recommendations adapted from the EULAR-recommended vaccinations in patients with autoimmune inflammatory rheumatic diseases on DMARD therapy. The questionnaire enquired into the awareness and uptake of the influenza B, pneumococcal and hepatitis B vaccines. They were sent out by postal mail, with an enclosed stamped address envelope, to all SLE patients within the university hospitals of Leicester (UHL) NHS trust identified via the rheumatology patient database. Questions included awareness of the need to have vaccinations whilst on DMARDs. The audit was conducted over a three month period and the results were compiled in Microsoft excel.

Results: Of the 396 SLE patients within UHL, 86 responded. Among the patients studied 38% were on DMARD therapy, an equal proportion claimed they were not and 23% were unclear if they were on DMARD therapy. Approximately 60% were unaware of the need for vaccinations and only 27.9% acknowledged awareness for the need of the 3 vaccines mentioned above. Fifty-six (60%) patients had the influenza vaccine yet only 26 (28%) and 15 (21.8%) had the Pneumococcal and Hepatitis vaccines respectively.

Conclusions: The increased infection rate in SLE can be reduced through vaccination. This highlights the importance of increasing both physician and patient awareness. Although the sample size was small, the above audit has revealed that current local practice, with regards to ensuring that all SLE patients are appropriately vaccinated, requires improvement. This can be achieved through patient and healthcare worker education, and also creating a checklist that can be added to the clinic notes. Working together with our primary care colleagues will also help bridge the divide between compliance and non-compliance. Such measures will aim to improve mortality and morbidity in SLE patients.

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AB0569

RELATIONSHIP BETWEEN THE LEVELS OF VITAMIN D AND THE ACTIVITY IN SYSTEMIC LUPUS ERYTHEMATOSUS IN DOMINICAN REPUBLIC

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Background: 25 (OH) D is a steroid prohormone that participates in calcium homeostasis and bone health.¹ Nonclassical functions of this vitamin have been described in a variety of cells of the innate and adaptive immune system. Currently, the immunomodulatory role of 25 (OH) D in Systemic Lupus Erythematosus (SLE) continues in debate. In addition, a correlation between non-optimal levels of 25 (OH) D and disease activity has been observed.² In the SLE, there is a high prevalence of non-optimal levels of vitamin D. A prevalence of 25 (OH) D insufficiency of 15% to 75% is reported.³

Objectives: To determine the relationship between vitamin D levels and disease activity in SLE.

Methods: It is a prospective, cross-sectional study, in all patients who attended the rheumatology clinic of the Hospital Docente Padre Billini in the period August – October 2017, where the levels of vitamin D and activity of the disease were measured with SELENA-SLEDAI (≤ 3 without activity, 3–12 moderate activity, ≥ 12 high activity). Vitamin D deficiency is defined as serum levels of 25 (OH) D <10 ng/ml, insufficiency levels serum levels of 25 (OH) D of <30 ng/ml.³ Inclusion criteria: all patients with at least 18 years of age who met the SLE SLICC 2012 classification criteria were included with determination of vitamin D and calcium.

Results: 45 patients who met criteria SLE SLICC 2012 were included. 97.7% (44) were women. The most frequent age range was 31–45 years. 24.4% (11) had decreased calcium values. The vitamin D values were insufficient in 77.7% (35) of the patients and deficient in 4.4% (2) According to SELENA-SLEDAI, 77.7% (35) had no activity of the disease, 20% (9) had moderate activity and 2.2% (1) had

high activity. Of the patients who reported disease activity, only 13.3%⁶ had insufficient vitamin D. There is no significant difference between patients who have vitamin D values greater than or less than 20 ng/ml. In both groups, the majority had SLEDAI-SLEDAI in low activity.

Conclusions: The vitamin D levels were not associated with an increase in disease activity in our study patients. Although our country is an island, the use of sunscreen and avoid sunbathing is something common, it causes to find low levels of vitamin D, not only in patients with SLE, where avoiding sunbathing is a recommendation, but also in other pathologies that come to our service. We believe that vitamin D levels should be measured in the general population, to have a reference range and study their influence on health.

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AB0570 ASSOCIATION BETWEEN SLEDAI-2K DOMAINS AND ORGAN DAMAGE ACCRUAL

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Background: Prevention of permanent organ damage is a key goal of SLE management¹. Overall disease activity measured by SLE Disease Activity Index (SLEDAI-2k) is a risk factor for damage², but the contribution of organ-specific activity to damage risk has not been enumerated.

Objectives: We sought to determine the degree to which organ domains of SLEDAI-2k are associated with damage accrual.

Methods: A dataset of SLE patients (2007 – 2017) at the Australian Lupus Registry was studied. Variables collected at each visit included all domains of SLEDAI-2k, Physician Global Assessment, and medications. Systemic Lupus International Collaborating Clinics/ACR Damage Index (SDI) was recorded annually and each visit was labelled “damage transition” or “non-damage transition” based on whether SDI increased at the subsequent annual measure. The association of risk of SDI increase with SLEDAI-2k domains was assessed using multivariable logistic regression analysis adjusted for confounding by medication use.

Results: 5538 visits from 266 patients (86.5% female, 47.4% Caucasian, 66% dsDNA positive) were analysed; at enrolment median (range) SLEDAI-2k was 4 (0–26) and SDI was 0 (0–4). Upon multivariable regression analysis, domains found to be significant were: low complement, proteinuria, haematuria, leukopenia, pyuria, pericarditis, alopecia, rash and arthritis. Upon further adjustment for prednisolone exposure, the effects of some domains were attenuated, but pericarditis (odd ratio (OR)=4.06, 95%CI=1.68–9.83), pyuria (OR=1.94, 1.47–2.56), arthritis (OR=1.71, 1.35–2.16), and rash (OR=1.43, 1.20–1.70), alopecia (OR=1.43, 1.10–1.86) and leukopenia (OR=1.36, 1.03–1.78) remained significant. No other SLEDAI-2k domains showed a significant association, in part due to infrequent occurrence. SLEDAI-2k domains weightings were not congruent with the respective risk of damage accrual.

Conclusions: In study, only some SLEDAI-2k domains were significantly associated with organ damage accrual. Re-appraisal of weightings in SLE disease activity scores based on their association with outcome is potentially warranted.

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AB0571 FACTORS RELATED TO ALEXITHYMIA IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Alexithymia describes the difficulties of people in identifying, differentiating and articulating emotions of others and themselves and in discriminating those from bodily sensations, with a limited fantasy and a concrete, externally oriented cognitive style.¹ A high prevalence of alexithymia has been found in patients with a variety of health conditions, including SLE.² Previous authors identified mood states² and quality of life³ as the main factors related to alexithymia in Systemic Lupus Erythematosus (SLE).

Objectives: Aim of our study was to assess the impact of clinical, immunological, psycho-social factors on the presence of alexithymia in Systemic Lupus Erythematosus (SLE).

Methods: We consecutively enrolled 104 patients in a cross-sectional study. Alexithymia was assessed using the Toronto Alexithymia scale (TAS-20). We also evaluated symptoms of mood disorders using BDI and HAM-H, quality of life using MOS-SF36, sleep disorders with PSQI and physical activity using IPAQ.

Results: The mean (standard deviation) TAS-20 score was 49.5 (15.6). The prevalence of alexithymia (TAS-20 ≥ 61) was 28%. Alexithymic patients (TAS-20 ≥ 61) were significantly older (p 0.0005), presented more severe depressive and anxiety symptoms (p<0.0001), a higher score of sleep disorders (p<0.0001), a reduced Facit-Fatigue score (p 0.0007), reduced SF-36 mental and physical component summary scores (p 0.0001 and 0.004) and increased daily sedentary time (p 0.002). In the multiple logistic regression analysis the variables associated to the presence of alexithymia were age (OR 1.07, p 0.02) and the score of depressive symptoms (OR 1.15, p 0.02).

Conclusions: About a third of SLE patients presented a dysfunctional processing of emotion. It is necessary to carefully consider the symptoms of mood disorders to optimise SLE patient management.

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AB0572 CORRELATION OF 24 HOURS URINARY PROTEIN QUANTIFICATION WITH RANDOM SPOT URINE PROTEIN/CREATININE RATIO IN PATIENTS WITH ACTIVE LUPUS NEPHRITIS

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Background: Proteinuria is an important signal of Lupus nephritis. The standard method of proteinuria quantification is 24 hours urine collection. The ongoing practice of using spot urine sample to determine the ratio between protein and creatinine excretion as a convenient, alternative method of proteinuria estimation is not without limitation and criticism questioning its accuracy.

Objectives: Given the cumbersome expressed by some patients on collecting 24 hours urine for protein quantification, our aim was to determine the correlation between spot urine protein-to-creatinine ratio (PCR) and 24 hour urinary protein (UP) in patients with active Lupus nephritis.

Methods: The active patients included in the analysis was 53 attending Dubai Hospital shared Rheumatology/Nephrology clinic during the period of June 2016 till Dec 2017. All diagnosed to have systemic lupus erythematosus who either had flare with proteinuria or newly diagnosed as Lupus nephritis. Suspicion of active Lupus nephritis was evidenced by active urine sediment and 24 hours UP quantification of more than 0.5 gm or more than 1.0 gm regardless to urine sediment. Paired baseline urine samples were obtained and results included in the final analysis. Most of the patients underwent ultrasound guided kidney biopsy to classify the nephritis according to ISN/RPS 2003 classification, unless contra-indicated or patient refused to give consent. We used Minitab 18.1 software to determine the Spearman’s correlation coefficient (r), and its significance. P-Value <0.05 was considered statistically significant