AB0542 PRESENTATION AND OUTCOME OF LUPUS NEPHRITIS IN THE MULTICULTURAL SOCIETY OF WESTERN AUSTRALIA – A SINGLE CENTRE EXPERIENCE

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Background: Lupus Nephritis (LN) is one of the most severe complications that can occur in patients with Systemic Lupus Erythematosus (SLE) as it increases the risk of renal failure, comorbidity and death. As with SLE, there is a significant impact of ethnicity on LN severity and outcome.
Objectives: To investigate the impact of ethnicity of LN presentation and health outcomes in a tertiary referral centre in Western Australia.
Methods: Single centre retrospective cohort study of 104 patients with biopsy confirmed lupus nephritis (LN) collating clinical characteristics, renal histopathology, serology, medication use, disease activity (Systemic Lupus Erythematosus Disease Activity Index - 2K (SLEDAI-2K)), organ damage (SLICC-Damage Index (SDI)), and clinical outcomes from index biopsy event to the last visit. Outcomes included the high serum creatinine ($\geq$150 umol/L), low eGFR ($<$50%), the need for renal replacement therapy (RRT), and death. Outcomes were assessed across ethnicity with comparative statistics, Chi-square, and survival analysis.
Results: Asian (n=17, 16.3%), Caucasian (n=79, 76.0%) and Indigenous (n=8, 7.7%) patients were similar for age (p=0.149), gender (p=0.309) and SLEDAI-2K (8.5 vs. 9.0 vs. 13.0, p=0.897), non-renal SLEDAI-2K (10.5 vs 2 vs. 1, p=0.528). Time to biopsy from the initial SLE diagnosis was shorter in Asian and Indigenous patients (p=0.055). At the index biopsy, ethnic groups were similar for WHO Class distribution (predominantly Classes 3 and 4, p=0.345) and clinical signs of renal disease (the presence of haematuria, proteinuria, pyuria and/or red cell casts) (p=0.874). Indigenous patients trended towards higher creatinine (66.0 vs 71.0 vs. 101.5, p=0.214), lower eGFR (60% vs. 60% vs. 32.5%, p=0.076), lower C3 (0.67 vs. 0.65 vs. 0.47g/L, p=0.375) and C4 (0.15 vs 0.12 vs 0.03g/L, p=0.272), and higher anti-dsDNA antibody levels (16.0 vs 26.5 vs 520.0, p=0.81), albeit non-significantly (due to low numbers).
At the last follow-up, 6.4 years (IQR 3.8, 12.4) after the index biopsy, 10%, 30% and 12.5% of Asian, Caucasian and Indigenous patients had high serum creatinine levels ($\geq$150 umol/L) (p=0.434) and 10%, 28.9% and 25.0% had low eGFR ($<$50%) respectively. Chronic renal replacement therapy (RRT) was needed in 0%, 5.1%, and 12.5%, respectively (p=0.386), while death occurred in 0%, 8.7% and 25.0%, respectively (p=0.115). Indigenous patients had the poorest survival rates at 1, 5 and 10 years compared to Caucasian patients (p=0.002).
Conclusions: This interim analysis demonstrated that Asian patients had a better prognosis regarding serum creatinine, eGFR, commencement of RRT and mortality, compared to Caucasian and Indigenous patients. Indigenous patients were both over-represented in this cohort and showed poorer prognosis in terms of RRT and mortality rates compared to Asian or Caucasian patients in WA.
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AB0543 ANXIETY AND DEPRESSION IN CHINESE PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME

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Background: Primary Sjögren's syndrome (pSS) is a multisystem autoimmune disorder characterised by lymphocytic infiltration and exocrine failure of salivary and lacrimal glands, resulting in the classical symptoms of the disease including xerostomia (dry mouth) and keratoconjuctivitis sicca (dry eyes). pSS has the potential to impair both psychological state and the health-related quality of life (HR-QOL). A common mental health problem among adults with pSS is anxiety and depression. In addition, depression is more common in pSS than in the general population and has been associated with enhanced fatigue, reduced health-related quality of life, increased levels of physical disability and increased health care costs. Besides, depressed pSS patients have poorer long-term outcomes, including more complications. Anxiety was more common than depression in pSS. The most affected domains were vitality in the SF-36 and general/physical fatigue in the MFI. Extraglandular systemic involvement was not a major determinant of QoL alteration in patients with pSS.
Objectives: Prevalence of anxiety and depression are high in women with Primary Sjögren's syndrome (pSS). Our aim was to compare anxiety and depression in pSS patients and healthy controls and evaluate its relationship with the disease activity, sleep and quality of life; as well as to analyze potential determinants of anxiety and depression.
Methods: Sixty-seven patients fulfilling the American-European Consensus Group criteria for pSS (mean age 52.76 years (s.d. 13.16)) and 42 age-matched healthy controls were included. Participants completed self-administered questionnaires, namely Hospital Anxiety and Depression Scale (HADS), Short Form 36 (SF-36) scores and the Pittsburgh Sleep Quality Index (PSQI). In addition, the European League Against Rheumatism Sjögren's Syndrome Disease Activity Index (ESSDAI); Patient Reported Index (ESSPRI) and systemic inflammation (erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) level) were recorded in patients. Independent samples t-tests, $\chi 2$ analyses and logistic regression modeling were used to analyze the data.
Results: pSS patients experienced greater anxiety and depression than controls (HADS-A scores: mean± SD 6.5±3.4 for pSS versus 3.8±3.4 for controls; P =0.002. HADS-D scores: mean± SD 6.7±4.1 for pSS versus 4.2±3.5 for controls; P =0.012). And there were significant correlations among fatigue, pain, disease activity, dryness, sleep, quality of life and anxiety/depression. Meanwhile, logistic regression analysis revealed that poor quality of life and ESSPRI were significantly associated with anxiety/depression in pSS patients.
Conclusions: The study suggests that optimal care of pSS patients may include the detection and management of anxiety and depression. Early recognition and appropriate intervention is therefore essential to reduce the negative impact of anxiety and depression on the patient's quality of life and outcome of their disease.
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AB0544 LEVELS OF VITAMIN D IN A COHORT OF PATIENTS WITH SYSTEMIC LUPUS ERITHEMATOSUS. RELATIONSHIP WITH DISEASE ACTIVITY AND BONE MASS

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Background: Vitamin D (vit D) is an immunoregulatory hormone which seems to mediate immune tolerance. Several studies have suggested that vit D deficiency may be related to increased disease activity in patients with systemic lupus erythematosus (SLE).
Objectives: To analyze 25-hydroxyvitamin D (25-OHD) levels in a cohort of patients with SLE and to investigate their relationship with clinical, analytical, immunological and densitometric parameters.
Methods: Prospective study including patients with SLE (according to SLICC criteria 2013) performed in an Academic Hospital with a referral area of 800.000 inhabitants. 152 patients with SLE were included (138 women [46 postmenopausal]/14 men) with a mean age of 46±12 years (range: 20–75). Clinical parameters (including risk factors for osteoporosis, presence of skeletal fractures, treatment with glucocorticoids (GCC) as well as SLE involvement including haematologic, renal, neurological and skin), biochemical determinations (including 25-OHD, parathormone (PTH)), immunological (ANA, DNA and complement) and SLE activity and severity (assessed by SLEDAI and SLICC index) were assessed in all patients. Bone mineral density was performed by DXA (at lumbar spine and proximal femur). Vit D deficiency was defined as 25-OHD values under 20 ng/mL. Low bone mass was considered as T or Z scale $<$-1 SD; and osteoporosis as T $<$-2.5 SD [age$>$50 years] or Z $<$-2 SD [age $<$50 years]. The study was approved by the Clinical Research Ethics Committee and all patients provided informed consent to participate. Statistical analysis was performed by SPSS.20.
Results: The mean values of 25-OHD were 19.8±11.4 (range, 4.2–66.6). 87.5% of patients had 25-OHD levels below 30 ng/mL, 61.2% below 20 ng/mL and 15.1% below 10 ng/mL. The lowest values were in winter (80%) and spring (64.3%). 42.8% of patients received vitamin D supplements. 56.5% of patients had low bone mass (T or Z scale $<$ -1 SD), and 15.8% had osteoporosis. Levels of 25-OHD showed no correlation with SLE disease activity (complement, Ac antiDNAds, SLICC/SLEDAI) neither with bone mass by DXA. Patients with low bone mass (T or Z $<$-1 SD scale) were older (at the time of inclusion and age of SLE diagnosis), had higher SLICC and lower complement levels whereas no differences were observed in SLEDAI and 25-OHD values. 37.5% of the patients were treated with GCC. Patients without GCC treatment had higher prevalence of vit D deficiency (73.9% vs. 55.6%, p=0.034) compared to patients with GCC treatment.
Conclusions: 61.2% of patients with SLE have 25-OHD deficiency, which is more frequent in winter and spring, and mostly in those patients without GCC treatment. 25-OHD values showed no correlation with the disease activity and damage. However, patients with low bone mass had higher SLICC and hypocomplementemia. Thus, our results suggest the need to perform clinical guidelines to assess bone mass and bone metabolism in this clinical condition. Additionally, we recommend quantifying vit D levels in winter/spring and don't forget to assess those patients without GCC treatment.
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AB0545 EFFECT OF EMPATHY NURSING ON THE LIFE QUALITY OF THEPATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: The patients with Systemic Lupus Erythematosus always had sub-health status in psychology and been troubled by the chronicity of the disease. Empathy nursing is an effective treatment for chronic disease such as cancer or terminal patients.

Objectives: To investigate the effect of empathy nursing on the life quality of patients with Systemic Lupus Erythematosus (SLE).
Methods: 120hospitalized patients with SLE admitted from January 2014 to December 2016 were divided into the control group and the experimental group for 60 people in each randomly. The control group was given routine care and the experimental group was given additional empathy care for 6 months. The World Health Organization Quality of Life (WHOQOL-BREF) Chinese version was evaluated on the 2nd day of hospitalization and 6 months after discharge respectively.
Results: Before intervention, the life quality of the two groups was poor. The scores of the control group and the experimental group in each field had no statistic difference (44.13±16.72 vs 44.08±17.33 in physiology, 51.13±14.38 vs 52.01±13.87 in psychology, 58.12±15.33vs 56.71±8.12in social relation, 54.93±13.2 vs 55.33±11.78 in environment and 52.52±15.6vs 52.03±13.44 overall), ($P>0.05$). After the intervention, the scores of the WHOQOL-BREF scale in the two groups were improved to different extents ($P<0.05$) (59.33±13.76 vs 66.77±16.21 in physiology, 57.43±7.88 vs 64.55±11.76 in psychology, 65.22±13.34 vs 72.11±8.12 in social relation and the overall scores were 59.95±14.32 vs 67.89±6.42).The scores of the four dimensions in physiology, psychology, social relations and environment were significantly different from those before the intervention ($P<0.05$). The improvement of the scores in physiology, psychology, social relations in the experimental group was more obvious than the control group ($P<0.05$).
Conclusions: Empathy nursing can obviously improve the life quality of SLE patients, and it is worthy to be popularized.
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AB0546 CLINICOPATHOLOGICAL CHARACTERISTICS OF SJÖGREN'S SYNDROME IN THE PRESENCE OR ABSENCE OF OBJECTIVE SICCA SYMPTOMS

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Background: Sjögren's syndrome (SS) is generally diagnosed on the basis of objective criteria, including xerophthalmia, xerostomia, autoantibodies, and labial salivary gland biopsy. Patients without objective sicca symptoms (non-sicca SS) require a biopsy. For such patients, we should evaluate pretest probability using parameters other than sicca symptoms before performing an invasive biopsy. To assess pretest probability, data on clinicopathological characteristics of non-sicca SS are needed.
Objectives: This study aimed to analyze the clinicopathological features of non-sicca SS. Epidemiological data, antibody profiles, organ involvement, and labial salivary gland biopsy results in non-sicca SS patients were compared with those in SS patients with objective sicca symptoms (sicca SS).
Methods: We selected 103 patients with primary SS who met Japanese or American College of Rheumatology criteria; those whose results exceeded the focus score by 1 underwent salivary gland biopsy. Objective xerophthalmia was evaluated with the Schirmer's test, and objective xerostomia with the Saxon's test. Seventeen patients were excluded because neither test was performed. Sicca SS was defined as a positive Schirmer's and/or Saxon's test result. Clinical and laboratory data were compared in 70 sicca SS and 16 non-sicca SS patients.
Results: Non-sicca SS patients were younger at diagnosis (45.9±14.8 vs. 61.4±15.1 years, $p<0.001$), had a shorter disease duration (1.1±1.5 vs. 6.9±8.9 years, $p<0.001$), and had a higher rate of positive anti-SS-A/Ro antibody (100 vs. 74.3%, p=0.023), and a lower rate of positive anti-centromere antibody (6.3 vs. 44.3%, p=0.005). Subjective xerophthalmia and xerostomia rates were similar between the groups, but fewer non-sicca SS patients had sicca symptoms as chief complaints (18.8 vs. 58.6%, p=0.004). There were no significant differences in focus score, leukocyte and lymphocyte counts, serum IgG levels, and positive rheumatoid factor and antinuclear antibody levels. The maximum European League Against Rheumatism Sjögren's Syndrome Disease Activity Index (ESSDAI) score during follow-up showed no significant difference (3.34±4.27 in non-sicca SS vs. 3.83±4.68 in sicca SS, p=0.30). However, more non-sicca SS patients had ESSDAI scores ≥ 1 (100 vs. 71.4%, p=0.015), a positive correlation with the biological domain of the ESSDAI (87.5 vs 58.6%, p=0.03), and articular symptoms (37.5 vs 8.6%, p=0.003).
Conclusions: Non-sicca SS patients were younger, had shorter disease duration, and a higher rate of positive correlation with the biological and articular domains of the ESSDAI. Moreover, all non-sicca SS patients had ESSDAI scores ≥ 1. When we diagnose SS patients without objective sicca symptoms, we should assess age, disease duration, and extraglandular organ involvement before performing labial salivary gland biopsy.
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AB0547 THE PREVALENCE AND THE RISK FACTOR OF HYPERTENSION AND DYSLIPIDEMIA IN SYSTEMATIC LUPUS ERYTHEMATOSUS PATIENTS: EXPLORATORY RESEARCH

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Background: Hypertension (HT) and dyslipidemia (DL) are the risk factors for all-cause mortality, cardiovascular and cerebrovascular disease, and end-stage renal disease in SLE patients [1)]. Neither disease activity nor chronic damage were associated with the metabolic syndrome in SLE patients [2)] and there were few reports about the risk factors of HT and DL in Japanese SLE patients.
Objectives: We aimed to describe a prevalence of HT and DL and to identify the risk factor of HT and DL in Japanese SLE patients.
Methods: All SLE patients visited at Showa University Hospital and Okayama University Hospital from January 2016 to September 2016, were enrolled in a cross-sectional study. SLE patients who satisfied American College of Rheumatology (ACR) criteria were included. HT was defined as usage of anti-HT drugs and DL was defined as usage of anti-DL drugs. We performed descriptive statistics and binomial logistic regression analysis to identify the risk factors of HT and DL. Variables considered possible risk factors were BMI, drinking status, smoking status (current smoking), current daily dose of glucocorticoids, past maximum dose of glucocorticoids, lupus nephritis, Systemic Lupus Erythematosus Disease Activity Index 2000 (SLEDAI-2K), and Systemic Lupus International Collaborating Clinics/American College of Rheumatology Damage Index (SLICC/ACR-DI).
Results: In total, 244 participants were enrolled. The mean age was 46.2±15.3 years, and 222 (91%) were female. The mean current daily dosage of glucocorticoids was 6.7±5.9 mg, and the mean SLEDAI-2K was 5.0±5.2 and the mean SLICC/ACR-DI was 1.3±1.7. The prevalence of HT and DL were 29.1% (71/244) and 22.1% (54/244). Both HT and DL were confirmed in 11.9% (29/244) patients. On binomial logistic regression analysis, BMI (regression coefficients (β)= -0.095; 95% confidential interval (CI) = -0.173 to -0.020), drinking status (β =0.443; 95% CI =0.000 to 0.879), past maximum dosage of glucocorticoids (β= -0.018; 95% CI = -0.036 to -0.004) and lupus nephritis (β= -0.727; 95% CI =0.230 to 1.241) were identified as the significant independent risk factors of HT. On the other hand, only age (β= -0.030; 95% CI = -0.055 to -0.006) was identified as the independent risk factor of DL. There was no independent risk factor of having both DL and HT.
Conclusions: Our results could help to identify patients at higher risk of HT and DL.
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AB0548 CIRCULATING PROLACTIN LEVEL IN SYSTEMIC LUPUS ERYTHEMATOSUS AND ITS CORRELATION WITH DISEASE ACTIVITY: A META-ANALYSIS

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Background: Prolactin has an immune stimulatory effect and may promote autoimmunity by encouraging the development of antigen presenting cells expressing MHC class II and co-stimulatory molecules and modulating IFN-γ secretion.
Objectives: This study aimed to evaluate the relationship between circulating prolactin level and systemic lupus erythematosus (SLE), and to establish a correlation between plasma/serum prolactin levels and SLE activity.
Methods: We performed a literature search for studies that examined prolactin status in SLE patients and controls, and the relationship between circulating (serum or plasma) prolactin levels and SLE using PUBMED, EMBASE, and Cochrane databases. We conducted a meta-analysis comparing the plasma/serum prolactin levels in patients with SLE to controls, and examined correlation coefficients between circulating prolactin level and SLE disease activity.
Results: Twenty-five studies with a total of 1,056 SLE patients and 426 controls were included. Prolactin levels were significantly higher overall in the SLE group than in the control group (SMD =0.987, 95% CI =0.512 – 1.463, $p=4.7\text{x}10^{-5}$). Stratification by ethnicity showed significantly elevated prolactin levels in the SLE group in Asian, Latin American, and mixed populations (SMD =0.813, 95% CI =0.137 – 1.490, p =0.018; SMD =0.981, 95% CI =0.307 – 1.655, p =0.004; SMD =1.469, 95% CI =0.443 – 2.495, p =0.005, respectively), but not in the European population. Meta-analysis of correlation coefficients showed