Methods Using a United Kingdom general population database, we conducted a cohort study of adult SLE patients, identified by Read codes. The exposures of interest were opioid prescriptions between January 1, 2007 and December 31, 2016. We classified opioids as weak, including tramadol and codeine, and strong, including hydrocodone, morphine, fentanyl, oxycodone, hydro-morphine, and methadone. We examined the proportion of patients receiving prescriptions for weak and strong opioids and performed logistic regression to assess whether prescription use of these medications varied by age, sex, duration of SLE, other medication use for SLE, lifestyle exposures (alcohol and tobacco use), and socioeconomic status. We adjusted for age and sex.

Results Of 10,784 SLE patients, (86% female, mean age 51.2 years), 32% were ever prescribed weak opioids (tramadol or codeine) and 10% were ever prescribed strong prescription opioids during the study period. 21% and 7% received multiple prescriptions for weak and strong opioids, respectively. Prescription opioid use was more common among older patients (adjusted OR 2.27 [95% CI 1.91–2.70] for weak opioid use and 2.94 [95% CI 2.14–4.03] for strong opioid use among patients over age 50 compared with those under age 30, (Table 1). SLE patients who were also taking NSAIDs, DMARDs, or glucocorticoids each had an increased odds of receiving prescription opioids. Current smokers were also more likely to be prescribed opioid prescriptions. There was no significant association found between deprivation score, a measure of socioeconomic status, and opioid usage.

Conclusions In this general population-based cohort study, nearly one-third of SLE patients were ever prescribed weak opioids and 10% were ever prescribed stronger opioids. This rate of opioid prescription use is higher among patients who are also taking NSAIDs, glucocorticoids, and DMARDs. These findings indicate the use of these potentially dangerous medications among a substantial portion of SLE patients. Future studies should assess the impact of opioid usage on mortality and other important outcomes among patients with SLE.

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158 CLINICAL AND SEROLOGICAL CORRELATIONS OF AUTOANTIBODIES DIRECTED AGAINST RNP-C IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background Autoantibodies to RNP-C protein, along with RNP-A, is a component of the U1RNP macromolecular complex. Antibodies to U1-RNP are typically associated with mixed connective tissue disease and other systemic autoimmune rheumatic diseases. Autoantibodies to RNP-C or their clinical significance have not been thoroughly studied in systemic lupus erythematosus (SLE). The goals of this study were to determine the frequency of anti-RNP-C autoantibodies in a SLE cohort and identify demographic, clinical, and serologic correlations.

Methods Patients fulfilling the ACR or SLICC Classification Criteria for SLE were enrolled in a local cohort. Demographic, clinical information (disease activity SLEDAI-2K; damage SLICC/ACR Damage Index (SDI)), and sera were collected at time of enrollment. Antibodies to anti-RNP-C were determined by a line immunoassay using a purified, full-length recombinant protein Euroimmun GmbH, Luebeck, Germany. Univariable and multivariable analysis were performed to determine associations between the prevalence of high positive anti-RNP-C and demographic (age, sex, race/ethnicity), clinical features (SLICC/ACR classification criteria, SLEDAI-2K and SDI total scores and subscales from SLEDAI-2K), medications, and other autoantibodies.

Results 138 SLE patients were included; 89.1% were female with a mean age of 46.1 years (SD 18.1 years) and disease duration of 13.7 years (SD 11.6 years). The prevalence of anti-RNP-C antibodies was 19.6% (27/138); 25.9% (7/27) were male. Univariable analysis demonstrated that patients fulfilling a higher total SLICC criteria (Odds Ratio, OR, 1.4 [95% Confidence interval, CI: 1.1–1.7]), particularly maculopapular rash (OR 4.0 [95% CI: 1.3–11.9]) and pericardial effusion (OR 6.3 [95% CI: 1.3–29.9]), or a higher SLEDAI score (OR 1.2 [95% CI: 1.0–1.3]) were more likely to be anti-RNP-C positive. Also, patients with higher immunological SLICC subscales (OR 1.8 [95% CI: 1.2–2.5]), anti-dsDNA (OR 7.6 [95% CI: 2.6–21.9]), anti-Sm (OR 29.7 [95% CI: 9.8–89.9]), anti-RNP (OR 44.2 [95% CI: 12.0–163.4]), anti-nucleosome (OR 9.4 [95% CI: 2.5–35.0]), anti-Ribosomal P (OR 7.4 [95% CI: 2.5–22.5]), or anti-RNP-A (OR 153.8 [95% CI: 35.8–660.5]) were associated with anti-RNP-C positivity. Patients who were female (OR 0.2 [95% CI: 0.1–0.7]), had longer disease duration (OR 0.9 [95% CI: 0.9–1.0]), or were on steroids (OR 0.3 [95% CI: 0.1–0.7]) were less likely to be anti-RNP-C positive. Multivariable analysis demonstrated that patients who were anti-RNP-A positive (OR 78.5 [95% CI: 6.5–941.2]) were more likely to be anti-RNP-C positive while those who were female (OR 0.1 [95% CI: 0.01–1.0]) were less likely to be anti-RNP-C positive.

Conclusions Anti-RNP-C antibodies were common (19.6%) in our SLE cohort. In SLE, they were associated with anti-RNP-A antibodies, a finding which is in keeping with the concept of inter-molecular epitope spreading. Most notably, anti-RNP-C antibodies were more likely seen to be seen in males with SLE. A thorough study of male SLE patients is needed.

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159 PEDIATRIC ONSET LUPUS WITH STEVENS JOHNSON SYNDROME/TOXIC EPIDERMAL NECROLYSIS: AN UNUSUAL ASSOCIATION

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Background The co-existence of SJS/TEN in context of childhood onset lupus is distinctly unusual and only a handful of cases have been reported in the literature. As the presentation of both illnesses can be heterogenous, simultaneous occurrence of both diseases in the same patient can pose diagnostic difficulties for the treating pediatrician.

Methods We report an 11 year old girl who presented with an SJS-TEN rash and had other features consistent with SLE.

Results An 11-year-old girl presented with history of alopecia, intermittent fever, a maculopapular rash progressing into patchy bullous and desquamating lesions, red scaly eyes and 2
episodes of generalized tonic clonic seizures. On examination, she had pallor, edema, oral ulcers and alopecia. She had distinct atypical targetoid lesions, diffuse erythematous rashes with denuded skin all over the face, trunk and extremities (involving >65% body surface area). There were bullae with positive Nikolsky sign. Deep tendon reflexes were brisk. Rest of the systemic examination was unremarkable.

Hemogram showed severe anemia, thrombocytopenia, lymphopenia and high erythrocyte sedimentation rate. Liver and kidney function tests were normal. Urinalysis showed subnephrotic range proteinuria. Antiphospholipid antibody workup (anti-cardiolipin IgG and IgM, 2 Glycoprotein I IgG and IgM, and lupus anticoagulant) was negative. Direct Coombs test was positive. Antinuclear antibody test by immunofluorescence was positive (4+homogeneous with rim enhancement). Anti-DsDNA antibodies tested positive by both enzyme linked immunosorbent assay as well as by immunofluorescence.

Skin biopsy showed full thickness epidermal necrosis. Magnetic resonance imaging (MRI) brain revealed presence of cerebral atrophy with multiple small infarcts suggestive of vasculitic changes. On the basis of clinical and laboratory findings, a diagnosis of SJS/TEN in context of childhood onset lupus was proffered. She was treated with intravenous immunoglobulin, pulse methylprednisolone, antimicrobials and anticonvulsants along with supportive care. The child, however, succumbed to her illness.

Conclusions SJS/TEN may, at times, be the presenting feature of childhood lupus. The etiology of SJS/TEN in this patient is conjectural but is unlikely to be drug induced given the time course of events.

Funding Source(s): NIL.

160 FEELING THE BENEFIT: LUPUS AND THE WORLD OF WELFARE

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Background This study explores peoples experiences of living and working with SLE whilst simultaneously navigating the contemporary UK welfare system. It is established that SLE is associated with high levels of workplace disability and early retirement from employment, requiring financial support. There is little literature about the experience of claiming benefits whilst living with a fluctuating, invisible medical condition, particularly in young people. Lupus is an exemplar of conditions which affect people in their most productive working years, treatable but not curable, which has profound effects on both educational and employment opportunities.

Methods A cross sectional online qualitative study was carried out of people aged 18 and over who were resident in the UK, with a self-reported diagnosis of lupus, through the LUPUS UK website. Participants responded to questions focusing on their experience of working and/or claiming benefits. Employment data is presented elsewhere. Participants were asked to quantify (with numerical rating scales) (i) psychological distress associated with income loss resulting from lupus, (ii) the proportion of income lost (iii) any fear experienced of being unable to sustain future employment (iv) levels of anxiety generated by engaging with the benefits system. There was space to describe these experiences and for additional information of the participants choice.

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Funding Source(s): No external funding required.

LOW HAPTOGLOBIN LEVEL IN LUPUS WITHOUT HEMOLYSIS

Homa Timlin. Johns Hopkins

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Background Low haptoglobin indicates hemolysis in lupus patients. We present a lupus patient who was found to have low haptoglobin levels in the absence of other evidence of hemolysis.

Methods Chart review.

Results A 44-year-old Caucasian woman was diagnosed with lupus about 11 years ago, characterized by positive ANA, anti-dsDNA, antinuclear antibodies, anti-beta-2 glycoprotein, Direct Coombs, hypocomplementemia, alopecia, arthralgia, arthritis, photosensitive skin rash, serositis, mucosal ulcer, and livedo. She was treated with hydroxychloroquine, steroids, and Imuran. During her first visit in our center, she was found to have mild alopecia and subtle synovitis of 2 small joints. She was taking hydroxychloroquine 400 mg. The hematocrit was 34 (up from 30–31, 3 months prior to the visit and 3 months after the visit), haptoglobin 41 mg/dL (normal 43–212 mg/dL), absolute reticulocyte count of 73 000/mm3 (normal 2000–80000), negative Direct Coombs, low positive anti-dsDNA of 15 (negative <4 IU/ml), low C3 of 72 mg/dL (normal 90–180), normal C4 of 17 mg/dL (normal 16–47), platelet counts of 147000 (140000–400000/ul), normal WBC (3 months prior to the visit and 3 months after the visit), normal urine protein creatinine ratio of 99 mg/g creatinine (normal 21–161), normal liver function test (one month prior and 3 months after the visit), and CRP was normal (<0.1 mg/dL).

Conclusions Further research is needed to detect anti-haptoglobin antibodies in lupus patients and elucidate the mechanism underlying these findings.

Funding Source(s): Non.