POS0791

DOSE-DEPENDENT RELATIONSHIP BETWEEN HISTORY OF DENTAL CARIES AND INCREASED RISK OF NEWLY-ONSET SYSTEMIC LUPUS ERYTHEMATOSUS: A NATIONWIDE POPULATION-BASED COHORT STUDY

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Background: The relationship between oral bacterial invasion caused by periodontal pathogens and risk of systemic lupus erythematosus (SLE) has been identified. However, there is a lack of knowledge on the relationship between carious lesions and risk of SLE, as well as longitudinal studies on the effect of restorative materials on SLE.

Objectives: This study investigated whether patients with history of dental caries are associated with an increased risk of newly-onset systemic lupus erythematosus (SLE).

Methods: A total of 541,461 carious patients and 258,918 controls without carious teeth were enrolled between 1997 and 2013 from the National Health Insurance Research Database. Subgroup analyses were conducted based on restorative materials included amalgam, resins or both. Cumulative incidences and hazard ratios (HRs) of developing SLE were derived after adjusting for age, gender, comorbidities and co-medications in a multivariable model.

Results: The risk of SLE was significantly higher in carious patients (HR = 1.984, 95% = 1.652-2.382) compared to controls. Dose-dependent relationship between caries and risk of SLE was identified. The risks of SLE were higher among those who had over 11 dental visits (HR = 2.525, 95% C.I. = 1.859-3.429), followed by those with 3-10 dental visits (HR = 1.863, 95% C.I. = 1.356-2.543), then those with 1-2 visits, and were higher among those who had over 5 carious teeth extractions (HR = 1.877, 95% C.I. = 1.186-2.970), followed by those with 1-4 carious teeth extractions (HR = 1.363, 95% CI = 1.167-1.593), then those without extraction. The risk of SLE among different restorative materials, including amalgam or resins, for caries management, were not significantly different.

Conclusion: Patients with caries were associated with higher SLE risks. The relationship between caries and risk of SLE was dose-dependent, regardless of used restorative materials.

Disclosure of Interests: None declared

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POS0792

BASELINE FACTORS ASSOCIATED WITH LUPUS FLARES: A POST-HOC ANALYSIS OF PATIENTS WITH MODERATE TO SEVERE ACTIVE SYSTEMIC LUPUS ERYTHEMATOSUS ENROLLED IN A 48 WEEK PHASE II RANDOMIZED CLINICAL TRIAL

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Background: Systemic lupus erythematosus (SLE) is a chronic disease characterized by periodic flares associated with poor outcomes and subsequent organ damage (1-2). Flare prevention is important for optimal patient management and development of effective therapies.

Objectives: To identify patient-level factors associated with flares among patients with moderate/severe SLE.

Methods: We conducted a post-hoc analysis of 260 patients with active, autoantibody+ SLE enrolled in a phase II randomized clinical trial (Fenebrutinib) (3). The relationship between baseline demographic (age, gender, ethnicity, BMI), region (US/EU, outside US/EU), disease severity (PGA, SLEDAI-2K, BILAG domain involvement), disease duration, serologic markers (C3, C4, ANA, anti-dsDNA Ab, anti-Smith Ab), treatment arm, standard of care (SOC) and flares (BILAG and SFI) over 48 wks was assessed by survival analysis and multiple Cox Proportional Hazard models. We examined concordance between BILAG and SFI flares using Cohen's Kappa Index.

Results: The overall rate of flare was low (n=37 SFI flare, n=25 BILAG flare). Median time to first flare was 8 wks for SFI flares compared to 12 wks for BILAG flares. There was no difference in flare rate by treatment arm. Cumulative flare hazard increased over time. Concordance between SFI and BILAG flares was 0.14. Multivariable analyses identified a higher flare rate for both SFI and BILAG-defined flares in patients with severe disease at baseline (PGA >1.7, SLEDAI-2K ≥10) and <7 y disease duration.

Flares were more common in patients ANA, anti-dsDNA and anti-Smith+ at baseline compared to patients with <3 + markers (p<.001). Furthermore, anti-dsDNA (p = .03) and/or anti-Smith (p = .001) positivity at baseline were better indicators of higher flare rate compared to ANA (p = 0.5). Low baseline complement

level (C3 and C4) was associated with a higher flare rate (p = .03 and p = .03 respectively).

Patients from non-US/EU regions had a higher flare rate compared to patients from the US/EU, despite receiving more frequent SOC therapy and higher baseline corticosteroid doses (≥10 mg/d). Overall, flare-free probability was comparable at 48 wks regardless of baseline corticosteroid dose but patients receiving <10 mg/d had a median time to flare of 4 vs 24 wks for those receiving ≥10 mg/d (p = .004).

Conclusion: In this study, flares were more common among patients with more severe disease, shorter disease duration, multiple serologic markers, were from outside the US/EU, and received lower steroid doses at baseline.

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Baseline Factors (%)	No Flare n=206	Flare		
		BILAG n=25	SFI n=37	BILAG and SFI n=8
Age (mean (SD))	41.8 (12)	35.2 (9)	40.4 (10)	34.9 (8)
Female	199 (97)	24 (96)	35 (95)	7 (88)
PGA (mean (SD))	1.7 (0.5)	1.7 (0.4)	1.9 (0.5)	1.7 (0.6)
BILAG A/B any domain	197 (96)	23 (92)	35 (95)	7 (88)
SLEDAI 2K ≥10	87 (42)	18 (72)	17 (46)	4 (50)
Disease duration (y) (mean (SD))	9.4 (7)	5.3 (4)	6.6 (6)	2.9 (3)
ANA +	203 (99)	24 (96)	35 (95)	8 (100)
anti-dsDNA +	102 (50)	18 (72)	21 (57)	5 (63)
anti-Smith +	45 (22)	13 (52)	12 (32)	4 (50)
Low C3	57 (28)	12 (48)	13 (35)	3 (38)
Low C4	26 (13)	7 (28)	4 (11)	1 (13)
Non US/EU	157 (76)	21 (84)	32 (87)	8 (100)
Corticosteroid ≥10 mg/d	130 (63)	14 (56)	21 (57)	5 (63)
Immunosuppressant	80 (39)	9 (36)	14 (38)	4 (50)
Antimalarial	74 (36)	12 (48)	15 (41)	3 (38)
	135 (66)	14 (56)	21 (57)	5 (63)

Notes: included patients 18-75 y; 1+ serologic marker of SLE; SLEDAI-2K ≥8, PGA ≥1; 1+ oral SOC treatment

SFI = SELENA- SLEDAI Flare Index

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POS0793

PREDICTORS OF END STAGE RENAL DISEASE IN THE RENAL BIOPSY PROVEN LUPUS NEPHRITIS

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Background: Although focusing on the proliferative form of lupus nephritis (LN), recent reports also highlight the importance of recognizing and treating non-proliferative forms of LN.

Objectives: In this study, we aimed to compare the clinical features and outcomes between proliferative and non-proliferative LN and to investigate the predictor factors of end stage renal disease (ESRD).

Methods: This retrospective study included 139 SLE patients who had at least one kidney biopsy between 2001 and 2020. 116 patients were diagnosed as LN. Biopsy findings had been classified according to the International Society of Nephrology and the Renal Pathology Society (ISN/RPS) classification. Demographics, disease involvements, laboratory values, treatment regimens, and outcomes in LN course were compared according to the proliferative and non-proliferative LN. Complete renal response within first 24 months was defined as ACR response criteria. Factors predicting the ESRD were analysed by the logistic regression analysis.

Results: A total of 116 lupus nephritis patients were categorised class 3 (n=17, 14.7%) or 4 (n=77, 66.4%) as proliferative LN and class 2 (n=9, 7.8%) or 5 (n=13, 11.2%) as non-proliferative LN. Of these patients, 80.2% was female. Mean age at the SLE diagnosis and SLE manifestations were similar for both group. ANA (+) ≥ 1:320, ds-DNA level, APS antibodies, anti-Sm (+) were similar for proliferative and non-proliferative LN, but ds DNA positivity and low level of C3 and C4 were more frequent in proliferative LN. LN duration was similar. Median renal SLEDAI scores were higher in proliferative LN group. Induction treatment regimens included pulse steroid 72.3%, CyC 51.8%, MMF 24.6%, Rtx 6.1%, CsA 4.4%, and plasma exchange 12.9%. ESRD, renal transplantation and exitus were major complications of LN. Predictors of ESRD were duration of lupus nephritis (OR 1.32 [1.09-1.61]; 95% CI), decrease in GFR at the biopsy time (OR 0.97 [0.95-0.99]; 95% CI), and being in complete renal response within 24 months (OR 21.07 [2.28-194.36]; 95% CI).

Conclusion: Unfortunately, LN patients still have worse outcomes, such as high ESRD rate, regarding to current effective immunosuppressive treatment regimens. Although patients' number were not enough for conclusion, interestingly, worse outcomes were not related with proliferative or non-proliferative LN. Complete remission within 24 months was most relevant good prognostic factor, and clinicians should be kept in mind to these windows of opportunity period.

Table 1. Demographic, clinical characteristics, and outcomes of the patients with lupus nephritis

Variables ^a	All patients (n=116)	Class 3 or 4 LN (n=94)	Class 2 or 5 LN (n=22)	p
Age at the SLE diagnosis, years	22.5±13.1	23±13.3	20.3±14	0.32
Sex, female	93 (80.2)	74 (78.7)	19 (86.4)	0.42
SLE disease duration	8 (8.7)	8 (9.7)	8.3 (7.5)	0.66
Lupus nephritis at diagnosis time	67 (58.8)	54 (58.7)	13 (59.1)	0.97
Manifestation of SLE				
-Musculoskeletal	75 (66.4)	63 (68.5)	12 (57.1)	0.32
-Mucocutaneous	60 (52.6)	50 (54.3)	10 (45.5)	0.45
-Hematologic	47 (40.9)	38 (40.4)	9 (42.9)	0.83
-Serosal	26 (23.2)	21 (23.1)	5 (23.8)	0.94
-Neurological	6 (5.3)	5 (5.4)	1 (4.8)	0.91
Laboratory values for kidney biopsy				
-Creatinine level (mg/dL)	0.7 (0.5)	0.8 (0.5)	0.6 (0.2)	0.01
-GFR (ml/min)	110 (67)	92 (55)	145 (59)	0.03
-≥ 60 ml/min	79 (79.8)	63 (77.8)	16 (88.9)	
-30-59 ml/min	8 (8.1)	7 (8.6)	1 (5.6)	0.55
-< 30 ml/min	12 (12.1)	11 (13.6)	1 (5.6)	
-24-hour urine protein				
≥ 1 gr/day	72 (71.3)	62 (76.5)	10 (52.6)	0.04
≥ 3 gr/day	36 (35.6)	32 (39)	4 (21.1)	0.14
-Active urinary sediment	91 (83.5)	78 (89.7)	13 (59.1)	0.001
Renal SLEDAI at the biopsy	12 (8)	12 (8)	8 (8)	0.001
Lupus nephritis duration (years)	5.5 (8)	5.1 (8.3)	6.4 (4.8)	0.73
Complete renal response within 24 months	69 (71.1)	55 (72.4)	14 (66.7)	0.61
End-stage renal disease	13 (11.2)	11 (11.7)	2 (9.1)	0.72
Renal transplantation	5 (4.3)	4 (4.3)	1 (4.5)	0.95
Exitus	8 (7)	7 (7.5)	1 (4.5)	0.62

^a n (%), if otherwise specified. Med (IQR) for numerical data excluding age; mean ± SD for age.

GFR: Glomerular filtration rate, LN: Lupus nephritis, SLEDAI: Systemic lupus erythematosus disease activity index

Disclosure of Interests: None declared

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POS0794

INCIDENCE AND PHENOTYPE OF ANTIPHOSPHOLIPID SYNDROME (APS) AFTER PREECLAMPSIA

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Background: Obstetric Antiphospholipid syndrom (oAPS) is induced by antiphospholipid antibodies (aPL) and associated with specific pregnancy complications. oAPS requires the combination of at least one obstetrical and one laboratory criteria (in 2 or more occasions at least 12 weeks apart). Multiple aPL positivity, lupus anticoagulant (LA) or persistently high aPL titers is defined as high risk aPL profile. "Non-criteria" oAPS are cases not fulfilling the clinical criteria.

Objectives: To investigate the incidence of aPL after preeclampsia and the association of phenotypes of oAPS and pregnancy outcome.

Methods: The present retrospective cohort analysis included women followed up after preeclampsia. Anti-PL (LA, aCL, anti-β2GPI of IgG and IgM isotype) are assessed 8 to 12 weeks after PE and if positive, again at least 12 weeks apart. According to the ISSHP PE is classified as severe if the blood pressure exceeds 160/110mmHg, or is associated with HELLP syndrome, or eclampsia. FGR is defined as estimated fetal weight <5th, and birth weight <10th percentile, and/or pathologic fetal Doppler.

Results: Complete clinical and laboratory data were available for 99 women over a period of 6 years. 38.4% delivered <34+0 weeks. PE was severe in 63.6% of cases, and the incidence of FGR was 58.9%. HELLP syndrome was diagnosed in 34.3% and in 4 cases it was isolated. The prevalence of aPL was 35 (35.4%) at first evaluation, and 23 (23.2%) were still positive 12 weeks apart. 14/99 (14.1%) cases fulfilled the definition of classical oAPS, and 9/99 (9.1%) delivered >34 weeks ("non-criteria oAPS"). Of interest, the incidence of high risk aPL profiles was similar in both groups (64.3% vs. 77.8%; p=NS). The incidence of HELLP syndrome was higher in the presence of APS (APS: 9/23 [39.1%] vs. 21/76 [27.6%]; p=NS). 3 out of 4 cases with isolated HELLP syndrome were associated with high risk aPL profiles. Overall, aCL IgG was the dominant aPL. 32/35 (91.4%) and 22/23 (95.7%) had positive aCL at first and second investigation, respectively (p=NS). An aCL IgG titer >32.8CU at first assessment yield a LR of 10 for persistent aCL with a sensitivity and specificity of 91.3% and 90.9%, respectively.

Conclusion: Classical and "non-criteria" obstetrical APS show a similar aPL pattern and distribution of aPL phenotypes regardless of gestational age at delivery. aCL IgG is the dominant aPL antibody and is highly predictive for aPL persistence at follow up. HELLP syndrome may be an additional feature of oAPS, in particular the isolated form. However, more studies are necessary to explore this possible association.

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POS0795

ULTRASOUND-GUIDED CORE NEEDLE BIOPSY: AN EFFECTIVE AND SAFE TOOL TO DIAGNOSE SJÖGREN'S SYNDROME AND LYMPHOMA OF THE MAJOR SALIVARY GLANDS

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Background: Histopathology is a cornerstone of diagnostics in Sjögren's syndrome (SjS). The current widely accepted standard, minor salivary gland (lip) biopsy, is a surgical procedure with several disadvantages including permanent sensory loss of the lips as a well-known complication (reviewed in 1). Moreover, lymphoma of salivary glands cannot be excluded. Ultrasound-guided core needle biopsy (CNB) is an excellent diagnostic tool with good safety (2) and encouraging results as compared to open biopsy (3).

Objectives: To retrospectively analyze safety and diagnostic outcome of ultrasound-guided CNB in patients with known or suspected SjS.

Methods: A retrospective analysis of a case series of four patients with known or suspected SjS. All patients were treated at the outpatient clinic of the Department of Rheumatology & Immunology, and the Department of Otorhinolaryngology. All patients underwent ultrasound-guided CNB: We clean and disinfect the ultrasound transducer and the skin of the patient before and after the procedure. We use a sterile probe cover and gloves. Only sterile ultrasound gel or ultrasound compatible disinfectant should be used. Core-needle biopsy was