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THU0284 PREVALENCE OF NEUROPSYCHIATRIC LUPUS IN PSYCHOSIS PATIENTS WITH A POSITIVE ANTINUCLEAR ANTIBODY

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Background: Psychosis is a rare manifestation of Neuropsychiatric Systemic Lupus Erythematosus (NPSLE). Patients with SLE may have Psychosis as part of their initial presentation of disease¹. Current guidelines do not make a recommendation regarding the use of Antinuclear Antibody (ANA) in the assessment of patients with psychosis². There is limited evidence assessing the utility of ANA testing in this setting.

Objectives: Primary objective: Determine the prevalence of NPSLE in patients admitted to a mental health service with a diagnosis of a psychosis, who have had a positive antinuclear antibody test.

Secondary objectives: Determine the frequency and proportion of positive ANA testing in this patient group. Determine the pattern and titres of positive ANAs. Determine the subsequent investigation, referral and diagnosis of patients with positive ANAs.

Methods: Retrospective chart review of patients admitted to a mental health service of two metropolitan tertiary referral centres, Prince of Wales Hospital (POWH) and Royal Prince Alfred Hospital (RPAH), with a diagnosis of psychosis who had been tested for ANA. Patients were identified using their electronically entered diagnosis based on the International Classification of Disease³ codes. Assessment of patient data for SLE used the 2019 ACR/EULAR classification criteria⁴. Decisions regarding attribution of psychosis related events to SLE follows the criteria used by Bortoluzzi et al⁵.

Results: Between 1st of January 2010 and 31st of March 2018 there were 5585 (POWH) and 4620 (RPAH) mental health admission with an ICD diagnosis of psychosis representing 2451 and 2315 individual patients. 449/2451 (18%) and 462/2315 (20%) patients were tested for ANA. 78/449 (17%) and 57/462 (12%) were positive. Discharge data was available for all patients and long-term follow up data was completed for 53/78 (81% - POWH) patients and 50/57 (88% - RPAH). The mean follow-up time 43 ± 23 months and 51 ± 29 months respectively.

At discharge there were four patients who met 2019 ACR/EULAR for SLE. Of these, two patients met criteria for NPSLE. One was diagnosed clinically and treated specifically for NPSLE with intravenous methylprednisolone and rituximab.

There were no additional diagnoses of SLE or NPSLE clinically or by criteria found in the available follow up data. Hence the overall prevalence of NPSLE in patients admitted with psychosis was 1.3%, 95%CI [0.6,9%] and 1.8%, 95%CI [0.9,4%] respectively.

Conclusion: The prevalence of neuropsychiatric lupus in patients with psychosis and a positive ANA was 1/78 and 1/57 a two tertiary referral centres. This study expands significantly on the limited evidence available as to the expected outcomes of a positive ANA test in a patient with psychosis.

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THU0285

ANALYSIS OF THE RELATIONSHIP BETWEEN ORGAN DAMAGE AND QUALITY OF LIFE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) is an autoimmune disease that can not only cause systemic symptoms, such as fever and arthritis, but can also damage important organs, such as those of the central nervous system and the kidneys. Prevention of irreversible organ damage is important for better prognosis [1]. Additionally, the importance of maintaining the quality of life (QOL) of patients has recently been emphasized. However, only a few studies have examined the relationship between irreversible organ damage and patient QOL.

Objectives: To assess the relationship between organ damage and QOL, and to survey which organs have more significant effects on QOL.

Methods: We conducted a questionnaire-based survey of 183 patients with SLE at Kyoto University Hospital from September to December 2019. We used the SLICC/ACR Damage Index (SDI) to evaluate organ damage [2]. The following five scales were employed to evaluate QOL: the physical (PCS) and mental component summary (MCS) of the Medical Outcome Study (MOS) 36-Item Short-Form Health Survey version 2.0 (SF-36v2) [3], health (HRQOL) and non-health-related QOL (N-HRQOL) of LupusPRO [4], and SLE Symptom Checklist (SSC) [5].

Results: Linear regression analysis showed significant correlation between the SDI score and all QOL scales except for N-HRQOL, suggesting negative effects of organ damage on QOL (Table 1). Next, we analysed whether there was a significant difference in the SF-36 score between those who were positive and negative for each SDI item (41 in total), using the Wilcoxon rank sum test. Muscle atrophy or weakness ($p = 3.0 \times 10^{-10}$), osteoporosis with fracture or vertebral collapse ($p = 9.7 \times 10^{-8}$), claudication ($p = 7.4 \times 10^{-5}$), and cognitive impairment or major psychosis ($p = 9.9 \times 10^{-5}$) significantly correlated ($p < 1.2 \times 10^{-3}$) with PCS, and scarring chronic alopecia ($p = 3.4 \times 10^{-4}$) with MCS (Table 2). In addition, the five SDI items significantly correlated with the remaining three QOL scales (HRQOL, N-HRQOL, and SSC; $p < 0.05$).

Table 1. Relationship between the SDI score and QOL

	SF-36		LupusPRO		SSC
	PCS	MCS	HRQOL	N-HRQOL	
p-value	$<2.0 \times 10^{-16}$	1.7×10^{-3}	2.2×10^{-11}	0.23	1.9×10^{-8}

Table 2. Relationship between each SDI item and the SF-36 score ($p < 1.2 \times 10^{-3}$)

SDI item	PCS score		<i>p</i> -value
	Positive	Negative	
	(Median (IQR))	(Median (IQR))	
Muscle atrophy/weakness	33 (19-45)	50 (43-54)	3.0×10 ⁻¹⁰
Osteoporosis with fracture/vertebral collapse	24 (12-32)	49 (38-54)	9.7×10 ⁻⁸
Claudication	31 (19-35)	49 (38-54)	7.4×10 ⁻⁵
Cognitive impairment/psychosis	27 (17-33)	49 (38-54)	9.9×10 ⁻⁵
SDI item	MCS score		<i>p</i> -value
	Positive	Negative	
	(Median (IQR))	(Median (IQR))	
Scarring chronic alopecia	42 (29-51)	49 (39-54)	3.4×10 ⁻⁴

Conclusion: We demonstrated that organ damage has negative effects on patient QOL, indicating the importance of preventing irreversible organ damage for maintaining QOL. Moreover, muscle atrophy/weakness, osteoporosis with fracture/vertebral collapse, claudication, cognitive impairment/major psychosis, and scarring chronic alopecia significantly correlated with QOL deterioration, suggesting that these items should be examined with special care in clinical practice.

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