CS-18 CEREBROVASCULAR EVENTS IN SYSTEMIC LUPUS ERYTHEMATOSUS: RESULTS FROM AN INTERNATIONAL, INCEPTION COHORT STUDY

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Background Vascular disease, including involvement of the cerebral circulation, is a frequent cause of morbidity and mortality in SLE. Cerebrovascular events (CerVEs) are reported in 5–18% of patients in previous cohort studies. Potential etiologies include procoagulant factors due to SLE (e.g. antiphospholipid antibodies, endothelial activation and vasculitis) and factors which promote accelerated atherosclerosis (e.g. hypertension, hyperlipidemia and SLE itself). The relative contributions of these factors and the outcome of clinical CerVEs in a general lupus population have not been well documented.

Objective To determine the frequency, associations and outcomes of cerebrovascular events (CerVEs) in a multi-ethnic, racial, prospective, SLE disease inception cohort.

Methods Patients were assessed annually for 19 neuropsychiatric (NP) events including 5 types of CerVEs: (i) Stroke; (ii) Transient ischemia; (iii) Chronic multifocal ischemia; (iv) Subarachnoid/intracranial hemorrhage; (v) Sinus thrombosis. Global disease activity (SLEDAI-2K), SLICC/ACR damage index (SDI) and SF-36 scores were collected. Time to event, linear and logistic regressions and multi-state models were used as appropriate.

Results Of 1,826 SLE patients, 88.8% were female, 48.8% Caucasian, mean±SD age 35.1±13.3 years, disease duration 5.6±2.2 months and follow-up 6.6±4.1 years. CerVEs were the fourth most frequent NP event: 82/1,826 (4.5%) patients had 109 events, 103/109 (94.5%) were attributed to SLE and 44/109 (40.4%) were identified at enrollment. The predominant events were stroke [60/109 (55.0%)] and transient ischemia [28/109 (25.7%)]. CerVEs were associated with other NP events attributed to SLE (HR (95% CI): [3.16; 1.73–5.75] (p<0.001), non-SLE NP (2.60; 1.49–4.51) (p<0.001), African ancestry at US SLICC sites (2.04; 1.01–4.13) (p=0.047) and organ damage (p=0.041). Lupus anticoagulant increased the risk of first stroke and sinus thrombosis [2.23 (1.11; 4.45) p=0.024] and TIA [3.01 (1.15; 7.90) p=0.025]. Physician assessment indicated resolution or improvement in the majority but patients reported sustained reduction in SF-36 summary and subscale scores following CerVEs (p<0.0001).

Conclusion CerVEs, the fourth most frequent NP event in SLE, are usually attributable to lupus. In contrast to good physician reported outcomes, patients report a sustained reduction in health-related quality of life following CerVEs.

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