Background: Data regarding interstitial lung disease (ILD) in the setting of systemic lupus erythematosus (SLE) are limited.

Objectives: We used a nation-wide database to determine the incidence and the prevalence of ILD in SLE patients.

Methods: Characteristics of all SLE inpatients admitted between 2011 and 2012 in France were analyzed through the French medico-administrative database. Features associated with the presence of ILD were studied. Cox proportional hazards models were used to model the risk of ILD on survival from the first stay to 2020. The incidence rate of ILD in SLE was estimated by analysing the onset of ILD from 2013 to 2020 in SLE patients who had no evidence of ILD in 2013.

Results: Between 2011 and 2012, 10,460 SLE patients had at least one hospital stay and could be traced until 2020. Among them, 154 (1.2%) had an ILD diagnosis at baseline. The frequency of ILD in SLE was higher in patients who had an associated autoimmune disease – such as Sjögren’s syndrome or systemic sclerosis (29.9% vs 5.9%; p<0.0001). ILD was associated with an increased risk of death in SLE after adjustment on comorbidities in the multivariable analysis (HR [CI95] 1.992 [1.420-2.794]; p<0.0001). Among the 31,029 SLE patients with no evidence of ILD at baseline, ILD occurred in 795 SLE patients (2.6%) between 2013 and 2020. The incidence rate of ILD in SLE was 10.26 per 1000 patient-years [CI95: 10.24-10.28].

Conclusion: In SLE, ILD is exceedingly rare, often associated with another systemic disease.

Disclosure of Interests: None declared.
targeting the U1 small nuclear ribonucleoprotein particle (U1RNP), and various clinical features of other connective tissue diseases (1-2). Interstitial lung disease (ILD) is an established complication of the disease that is suspected to affect morbidity and mortality (3). However, little is known about MCTD-associated ILD (MCTD-ILD) phenotype including first presentation, outcomes and predictive factors for progression.

**Objectives:** To compare two distinct populations of MCTD patients with and without associated ILD and to identify predictive factors for lung progression and survival.

**Methods:** International multicenter retrospective study (12 tertiary hospitals). To be included, patients were required to fulfill at least one MCTD international classification criterion (4). ILD was defined by the presence of typical chest high-resolution computed tomography (HRCT) abnormalities. Patients were divided into two groups: with or without ILD, at a ratio of 1:1 and matching on disease duration (+/- 2 years).

**Results:** 300 patients were included. Mean age at MCTD diagnosis was 39.7±15.4 years and 191 (63.7%) were women. At baseline, we identified several variables associated with the presence of ILD: older age (42.2 vs 37.5 years, p=0.01), scleroderma-like phenotype (38.7 vs 27.3%, p=0.03), upper gastro-intestinal (GI) symptoms (54.7 vs 30.7%, p<0.001), forced vital capacity (FVC) <80% (80.4 vs 95.3%, p=0.0001), diffusing capacity for carbon monoxide (DLCO) <80% (82.4 vs 74.8%, p=0.0001), anti-topoisomerase antibodies (6 vs 0 patients, p=0.01), SSA/Ro antibodies positivity (29.3 vs 19.3%, p=0.02), cryoglobulinemia (5.3 vs 1.3%, p=0.04) and elevated C-reactive protein (CRP) >5mg/L (54.7% vs 27.8%, p<0.001). Among the previous variables older age (OR 1.03, 95% CI 1.01 to 1.05), upper GI symptoms (OR 1.92, 95% CI 1.03 to 3.58) and CRP >5mg/L (OR 6.77, 95% CI 2.94 to 26.22) remained significantly associated with the presence of ILD by multivariate analysis. Patients with MCTD-ILD were more likely to be treated with synthetic immuno-suppressant agents (68.7 vs 49.3%, p<0.001) including mycophenolate mofetil (MMF) (7.3 vs 1.3%, p<0.03).

Mean follow-up was 7.8±5.5 years. In longitudinal analyses, mortality was higher in the MCTD-ILD group (8 vs 0 deaths, p=0.001). In the MCTD-ILD group, among 60 patients with complete data on lung function tests, we observed a FVC decline >10% in 33 (55%) patients. With regards to the risk of progression, we identified that history of digital ulcers (DU) was a risk factor for FVC decline >10% (OR 6.75, 95% CI 1.72-26.4, p=0.006).

**Conclusion:** In this large international cohort of patients with MCTD, we identified several factors associated with ILD development. Our findings highlight a high risk of mortality in MCTD-ILD patients and that digital ulceration seems to be at risk of more progressive ILD.

**REFERENCES:**

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**POSO067**

**PULMONARY FUNCTION IN PATIENTS DIAGNOSED OF EARLY SYSTEMIC SCLEROSIS: 10 YEARS EXPERIENCE.**

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**Background:** Interstitial lung disease (ILD) is a frequent complication of systemic sclerosis (SSc) and is often progressive and has a poor prognosis. A restrictive ventilatory defect could suggest ILD either alone or in combination with pulmonary arterial hypertension. Nowadays, Early-SSc is well defined as preliminary stage of SSc. Patients who meet criteria for Early-SSc could benefit from an early diagnosis of pulmonary involvement.

**Objectives:** Our aim was to assess the pulmonary function in patients diagnosed of Early SSc.

**Methods:** Retrospective observational study of a wide and unselected series of patients diagnosed as Early-SSc from a single university hospital from 2012 to 2022. Patients were classified as Early-SSc following Le Roy criteria. Despite this, patients already did not meet 2013 ACR/EULAR classification criteria for SSc. We reviewed pulmonary function through conventional spirometry and diffusing capacity of lungs for carbon monoxide (DLCO).

**Results:** We included 61 patients with a mean age of 52.9±6.2 years (90.9% women; 9.1% men).

At the diagnosis of Early-SSc, no one of our patients evidenced a restrictive ventilatory pattern. DLCO was below normal limits in 21 patients (34.4%). Small airway obstruction expressed according decreased maximal (mid-) expiratory flow (MMEF) 25-75 was present in 26 patients (42.6%).

After a mean follow-up period of 42.4±3.2 months, 29 (47.5%) patients fulfilled 2013 ACR/EULAR criteria. The average time between diagnosis of Early-SSc and achieve SSc classification was 24.4±1.8 months. The remaining 32 patients continued classified as Early-SSc. An analysis of the subgroup of patients which progressed to SSc showed that DLCO was decreased in 15 of those 29 patients (51.7%) and 18 of 29 patients (62.1%) presented decreased MMEF 25-75. Comparing with the subgroup of patients which not progressed to SSc were significant differences (Decreased DLCO: 51.7% vs 10.4%; p=0.01 and decreased MMEF 25-75: 42.8% vs 24.6%; p=0.03).

**Conclusion:** In our study, a third of the patients classified as Early-SSc presented at diagnosis abnormal values of DLCO and/or signs of small airway obstruction without the presence of a restrictive ventilatory pattern. Moreover, this pulmonary dysfunction was significantly more frequent in patients who progressed to definitive SSc. Patients which remains classified as Early-SSc did not experience significant changes.

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