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Figure 1. Cumulative incidence of any conduction or any rhythm disorder in SSc (solid line) vs non-SSc comparators (dashed line).

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POS0836
CONDUCTION AND RHYTHM DISORDERS AMONG PATIENTS WITH SYSTEMIC SCLEROSIS: A US POPULATION BASED STUDY

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Background: Systemic sclerosis (SSc) can impact multiple areas of the patient through fibrotic and vascular processes; leading to variable cardiac involvement including electrocardiogram (ECG) abnormalities. Conduction and rhythm disorders are associated with worse prognosis in patients with SSc. (1, 2)

Objectives: To study the incidence, risk factors and outcomes of conduction and rhythm disorders in a US population-based cohort of patients with SSc and non-SSc comparators from the same geographic area.

Methods: A previously identified incident cohort of SSc patients (1980-2016) in a well-defined geographic area was compared to a randomly selected 2:1 cohort of age- and sex-matched non-SSc subjects from the same population base. Demographics, disease characteristics, cardiovascular risk factors and laboratory tests were abstracted by manual record review and Holter ECGs were reviewed to determine the occurrence of any conduction or rhythm abnormalities. The need for cardiac interventions was also abstracted.

Results: 78 incident SSc cases and 156 non-SSc comparators were identified [age 56 years± 15.7, 91% female]. Prevalence of any conduction disorders before SSc diagnosis compared to non-SSc comparators was 15% vs. 7% (p=0.08), and any rhythm disorder was 18% vs. 13% (p=0.33). During a median follow up of 10.5 years in patients with SSc and 13.0 years in non-SSc comparators, conduction disorders developed in 25 SSc patients with a cumulative incidence (ci) of 20.5% (95% CI: 12.4-34.1%) compared to 28 non-SSc patients with ci of 10.4% (95% CI: 6.2-17.4%) (HR: 2.57, 95% CI: 1.48-4.45), while rhythm disorders developed in 27 SSc patients with ci of 27.3% (95% CI: 17.9-41.6%) vs 43 non-SSc patients with ci of 18.0% (95% CI: 12.3-26.4%) (HR: 1.62, 95% CI: 1.00-2.64) (Figure 1).

Conduction disorders in patients with SSc during follow up included: 1st-degree atrioventricular block (AVB) (n=12), 2nd-degree AVB (n=1), 3rd-degree AVB (n=1), right bundle branch block (n=10), left bundle branch block (n=4), biventricular block (n=6), and prolonged QT (n=13). Rhythm disorders included: atrial fibrillation (n=10), atrial flutter (n=4), supraventricular tachycardia (n=4), ventricular tachycardia (n=1), and premature ventricular contractions (n=16).

Pulmonary hypertension (PHT) was the only significant risk factor identified for development of both conduction and rhythm disorders (HR=8.38, 95% CI: 1.32-53.40 and HR=8.07, 95% CI: 1.60-40.74, respectively). Current smoking significantly increased the risk for development of rhythm disorders (HR=2.91, 95% CI: 1.19-7.12). Conduction and rhythm disorders were associated with increased mortality among patients with SSc (HR=7.90, 95% CI: 3.43-16.55 and HR=4.87, 95% CI: 2.28-10.42, respectively, after adjusting for age, sex and calendar year of diagnosis).

Conclusion: Patients with SSc have a significantly higher prevalence of conduction disorders at disease onset than non-SSc comparators. During the course of their disease, their risk of developing conduction disorders is 2.6-fold, and risk of rhythm disorders is 1.6-fold increased, compared to non-SSc subjects.

PHT was significantly associated with increased risk of developing conduction and rhythm disorders among patients with SSc, a finding that should warrant increased vigilance and screening for ECG abnormalities in this population.

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1. Background: Systemic sclerosis is an autoimmune disease, characterized by fibrosis due to immune-mediated microangiopathy. Digital ulcers-DUs represent frequent complications, they are recurrent, painful and often resistant to traditional treatments. Standard therapy, in particular oral opioids, is often
inadequate or limited by side effect. Cannabidiol-CBD, is the major non-psycho-
tropic component of the Cannabis sativa, recent studies on its effectiveness as
an anxiolytic, anti-inflammatory, and antipsychotic drug showed promising
results, in the setting of chronic pain too.

Objectives: We evaluated the efficacy of CBD drop in pain management in a
cohort of SSc patients using standard rating scale VAS, PSQI and HAQ. We
further assessed the safety profile and the potential use as opioid-sparing.

Methods: From January to November 2019 we consecutively enrolled 31 SSc
patients (F/M 26/5, mean age 53.0±14.4-SD-years) referred to our Scleroderma
Unit. All patients satisfied the EULAR/ACR SSc classification criteria. All cases
were complicated by painful DUs resistant to analgesics and pain was classified
as severe, according to WHO guidelines. CBD drops consist of cannabis sativa
seed in olive oil, 10% CBD, laboratory tested to confirm a tetrahydrocannabi-
nol-THC level<0.3%. The CBD oil was administrated sublingually twice-a-day. All
patients started with CBD 3 drops twice-a-day, and progressively increased to
the maximum dosage of 6 drops twice-a-day (from 27.6 mg t.w. to 55.2 mg dose/day).
All patients continued local/systemic treatments for SSc: 24/31 subjects performed
calcium-channel blockers, 31/31 protonadons infusion, 24/31 anti-endothelin
drugs. All subjects were provided with a daily record to report self-evaluation of
pain using VAS, PSQI, hours of sleep per night, use of other analgesics, eventual
side effects. HAQ-DI was also administered. These indicators were assessed
baseline and during follow-up. Safety of CBD was evaluated by patient's records
of side effects. All data were analyzed by paired t-test. This investigation was a
monocentric, prospective study. Ethical approval was obtained from the Com-
petent Ethics Committee (protocol n. 282/15) and all participants gave written
consent.

Results: CBD was administered for a mean period of 5.9±3.2SD-months.
After the first month, VAS decreased from 54.80±8.72SD to 54.70±29.40SD
(p<0.0001), PSQI decreased from 9.27±2.9SD to 4.47±1.06SD (p<0.0001), total
hours of sleep increased from 2.56±1.28 SD to 5.67±0.85SD (p<0.0001). The
additional analgesic therapy was necessary in 22/31 patients: 6/22 only par-
acetamol, 12/22 paracetamol-oxycodone reducing the dosage of oxycodone at
the minimum, 2/22 oxycodone 20 mg twice-a-day, 2/22 need fentanyl transfer-
mal patch. After 3 months, VAS further reduced to 40.90±12.90, PSQI decreased
to 3.1±1.4SD, the mean total hours of sleep per night was 6.10±0.79SD and
the HAQ-DI decreased from 2.19±0.67SD (baseline) to 0.79±0.46SD at the
last patients' evaluation. At the end of the observation, 18/31 patients (58%)
showed DUs healing. We also interestingly reported improvement of dysphagia
and appetite in 70%, and an improvement in constipation related to opiods in
48%. No patients experienced severe side effects in particular no psychoactive
aspects. Mild side effects, namely dry mouth was referred by 9/31 (29%), mild
abdominal pain and changes in appetite by 10/31 (32%). No interaction with
other drugs was observed.

Conclusion: Our study suggests that oral CBD is effective and safe in maintain-
ing analgesia in SSc patients with DUs. Furthermore, CBD could be helpful in
opioids tapering and to treat dysphagia, even if these observations need focused
investigations. In conclusion, CBD might be a useful tool to manage chronic pain
in SSc-DUs. These data provide a compelling rationale for further research to
clarify the therapeutic potential of CBD in SSc.

Disclosure of Interests: None declared

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POS0839

EPIEIDEOLOGY AND TRENDS IN SURVIVAL OF
SYSTEMIC SCLEROSIS IN OLMSTED COUNTY: A
POPULATION-BASED STUDY (1980-2018)

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Background: Systemic sclerosis (SSc) is a complex immune-mediated disease
with heterogeneous manifestations, which is characterized by vasculopathy and
fibrosis of the skin and visceral organs. Mortality associated with SSc exceeds
that of other rheumatic diseases, though population-based studies assessing
recent trends in survival are lacking.

Objectives: We aimed to determine the incidence and prevalence of physi-
cian-diagnosed SSc in a population-based cohort over a 39-year time period,
and assess for trends in survival over time.

Methods: Medical records of patients with a diagnosis or suspicion of SSc in a
geo-graphically well-defined area from Jan 1, 1980 to Dec 31, 2018 were reviewed to
identify incident cases of SSc. Cases were defined by physician diagnosis of
SSc, and fulfillment of the 2013 ACR/EULAR classification criteria was ascer-
tained. Prevalent cases of SSc on Jan 1, 2015 were also identified. Incidence and
prevalence rates were age- and sex-adjusted to the 2010U.S. white population.
Survival rates were compared with expected rates in the general population.

Results: 85 incident cases of SSc (91% female, mean age 55.4 ± 16 y) and
49 prevalent cases on Jan 1, 2015 were identified. Patients had a mean 11.7 (SD 9.4) years of follow-up available. The overall age and sex adjusted annual
incidence for 1980-2018 was 2.5% (95% CI: 2.0-3.1) per 100,000 population, with
no change in incidence over time (p=0.32). The age-adjusted incidence was
4.4 (95% CI: 3.4-5.4) for females, and 0.9% (95% CI: 0.16-0.96) for males per 100,000
population. The age- and sex-adjusted prevalence on Jan 1, 2015 was
15.6% (95% CI: 13.3-18.8) per 100,000 population.

Survival (91% patients) at the end of the observation period was 77% (95% CI:
69-87) at 5 years, 66% (95% CI: 56-78) at 10 years, and 42% (95% CI: 30-57) at 20 years, with no evidence of improved survival over time (p=0.46). Age (Hazard ratio [HR]: 1.49 per 10 year increase; 95% CI 1.19-1.86), smoking at time of diagnosis (HR: 2.37; 95% CI: 1.05-5.34), digital ischemia (HR: 2.54; 95% CI: 1.33-4.87), ILD (HR: 4.00; 95% CI: 2.11-7.59), and PAH (HR: 4.30; 95% CI: 2.24-8.25) had significant associations with mortality.
Survival of patients with SSc was poorer than the general population (standard-
ized mortality ratio: 2.48; 95% CI: 1.76-3.39).

Conclusion: The average incidence of SSc in this population-based cohort
spanning 39 years was 2.5 per 100,000 population, with no change in incidence
over time. Age, smoking, digital ischemia, ILD and PAH were risk factors for
poorer survival. Overall survival for patients with SSc is worse than that of the
general population and shows no improvement over time, suggesting continued
need for improved diagnostic and treatment measures.

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POS0839

BODY COMPOSITION AND FREQUENCY OF
SARCOPENIA IN PATIENTS WITH SYSTEMIC
SCLEROSIS

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2Background: Sarcopenia can be age associated (primary form) or secondary
to chronic disorders, including rheumatic inflammatory disorders. Systemic scler-
osis (SSc) is a chronic autoimmune rheumatic disease characterized by wide-
spread vasculopathy, progressive fibrosis of the skin and other internal organs,
such as lung, kidneys, gastrointestinal tract, cardiovascular system. Different from
the other chronic rheumatic inflammatory body disorders, sarcopenia has not
been well evaluated in SSc patients.