

same correlation. It would be rational to highlight only one zone of prognosis before and after 5,8.

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AB0456

### HYDROXYCHLOROQUINE MIGHT REDUCE MORTALITY IN PATIENTS WITH SYSTEMIC SCLEROSIS

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**Background:** Systemic sclerosis (SSc) is a devastating disease that has a profound impact on life expectancy, reflected by a standardised mortality ratio of 3,5. There is still limited data regarding the predictive factors for mortality in patients with SSc. Determining those factors could guide in disease management and follow up.<sup>1</sup>

**Objectives:** We aimed to identify the predictive factors for death in SSc.

**Methods:** Patients followed in a tertiary rheumatology clinic in the last 5 years were included in this retrospective study. All of the patients met the ACR / EULAR SSc 2013 criteria. Medical records of the patients were reviewed. Follow up time was defined as the time period from the first admission of the patient to our rheumatology clinic until the date of death or the date on which the study was performed. Candidate predictive factors for mortality were tested by Kaplan-Meier (with Log rank) and Cox-regression analyses.

**Results:** In total 146 patients (mean age 55.6±12.3 years, female 89.7%, diffuse cutaneous type SSc 45.2%) were included in the study (Table 1). The mean age at diagnosis of study group was 48±13.7 years. The median duration of follow up was 71 (6-228) months. Fourteen (10%) patients died during follow-up. The causes of death were: pulmonary (7), renal (2) and cardiac diseases (1), infection (3) and cancer (1).

Univariate analysis revealed that age at diagnosis (p=0.028), SSc subtype (p=0.035), the presence of interstitial lung disease (p=0.002), oesophageal involvement (on computed tomography) (p=0.030), pulmonary artery systolic pressure of ≥35 mmHg (measured by transthoracic echocardiography) (p=0.004), glucocorticoid (p=0.029), hydroxychloroquine (p=0.002) and cyclophosphamide (p=0.006) usage at any time were associated with mortality (Figure 1). Multivariate analyses model formed with age at diagnosis (B: 0.055, 95% CI, 1.005-1.112; **p=0.033**), SSc subtype (B: 0.963, 95% CI 0.541-12.684; p=0.231), glucocorticoid (B: 1.396, 95% CI, 0.487-33.507; p=0.196) and hydroxychloroquine usage (B: -1.50, 95% CI, 0.061-0.816; **p=0.023**) showed that age at diagnosis and hydroxychloroquine usage were independent predictive factors for mortality in patients with SSc.

**Conclusion:** The results of the study revealed for the first time that apart from the age at diagnosis hydroxychloroquine might reduce mortality in patients with SSc. Further studies are needed to prove of this information.

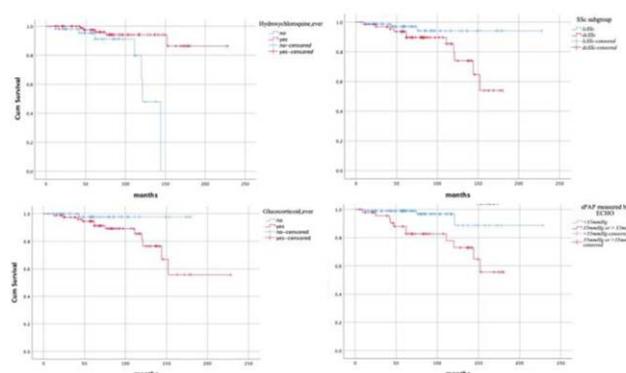
#### REFERENCES:

[1] Elhai M, et al. Ann Rheum Dis 2017;0:1–9. doi:10.1136/annrheumdis-2017-211448

**Table 1. The demographic and clinical features in patients with systemic sclerosis.**

Characteristic	Baseline
Age at diagnosis <sup>*</sup>	48±13.7
Female sex, n (%)	131 (89.7)
Duration of follow-up, months <sup>**</sup>	71 (6-228)
<b>Disease subtype, n (%)</b>	
Diffuse / Limited	66 (45.2) / 80 (54.8)
<b>Autoantibodies, n (%)</b>	
Anti-Scl70 antibody	50/143 (35.0)
Anti-Centromere antibody	62/143 (43.4)
<b>Immunosuppressive medication, ever, n (%)</b>	
Hydroxychloroquine	91/143 (63.6)
Mycophenolate mofetil	18/145 (12.4)
Azathioprine	47/145 (32.4)
Cyclophosphamide	24/145 (16.6)
Glucocorticoid	80/140 (57.1)
<b>Others, n (%)</b>	
ILD	68/130 (52.3)
Pericardial effusion, ever	26/133 (19.5)
Esophageal dilation (detected by CT)	51/128 (39.8)
sPAP ≥35mmHg, ever (measured by ECHO)	46/142 (32.4)

<sup>\*</sup>Parameter presented as mean±SD <sup>\*\*</sup>Parameter presented as median (min-max)CT, computed tomography; ECHO, echocardiogram; ILD, interstitial lung disease; sPAP, systolic pulmonary artery pressure



**Fig.** Cumulative survival of systemic sclerosis patients as determined by the Kaplan-Meier method.

SSc, systemic sclerosis; lcSSc, limited cutaneous systemic sclerosis; dSSc, diffuse cutaneous systemic sclerosis; sPAP, systolic pulmonary artery pressure; ECHO, echocardiogram

**Figure 1.**

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### HIPPOCAMPAL SUBFIELDS VOLUMES REDUCTION IN PATIENTS WITH SYSTEMIC SCLEROSIS: A LONGITUDINAL MAGNETIC RESONANCE IMAGING (MRI) VOLUMETRIC STUDY

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**Background:** Systemic sclerosis (SSc) is a multisystem disease characterized by functional and structural abnormalities of small blood vessels, fibrosis of the skin and internal organs. In addition, volume reduction and shape abnormality of the hippocampus have been demonstrated in rheumatic and neurodegenerative diseases. However, the neuroanatomy of the hippocampus is complex and is not a uniform structure, consisting of subfields with distinct morphology: cornu ammonis (CA) subfields CA1–4, dentate gyrus (DG), fimbria, and adjacent subiculum and presubiculum [1].

**Objectives:** To investigate the hippocampal subfields volumes reduction in SSc patients using MRI.

**Methods:** In this study we included 37 SSc patients (33 women, mean age of 53.46, SD ± 12.29; range 30 - 78) and 37 healthy controls (HC) (31 women, mean age of 48.41, SD±12.20; range 29 - 80). Cognitive evaluation was performed using the Montreal Cognitive Assessment (MoCA), mood disorders were determined through Beck's Depression (BDI) and Beck's Anxiety Inventories (BAI). SSc patients were further assessed for clinical and laboratory SSc manifestations, disease activity (Valentini Activity Index), severity activity (Medsker Severity Index). MRI protocol consisted of: Sagittal T1-weighted images performed with a Philips 3.0T MRI scanner. MRI brain structure volumetric was done through volBrain [2]. After 48 months MRI acquisition were repeated in 26 SSc patients and 12 healthy volunteers. Statistics was performed according nature of the variable.

**Results:** We observed a significant reduction in hippocampal subfields volumes in SSc patients when compared to controls: Total hippocampi (SSc: mean volume = 4.78 cm<sup>3</sup>; SD = 0.38; HC: mean volume = 5.01 cm<sup>3</sup>; SD = 0.38; p = 0.033). Reduction in volume of the total hippocampi was associated with Raynaud's phenomenon (p = 0.006). A longitudinal study showed a reduction in volume of the hippocampus subfields volumes when compared to patient's baseline: Total hippocampi (mean initial volume = 4.78 cm<sup>3</sup>; mean follow-up volume = 4.50 cm<sup>3</sup>, p = 0.027); Total CA1 (mean initial volume = 1.59 cm<sup>3</sup>; mean follow-up volume = 1.58 cm<sup>3</sup>, p < 0.0001); Reduction in volume of the total hippocampi was associated with presence of current use of prednisone (p = 0.008). Reduction in left CA1 left associated with current use of prednisone (p = 0.014). Reduction in total subiculum was associated with presence of calcinosis (p = 0.023). No significant changes were observed in hippocampal subfields volumes in controls over the follow-up period.

**Conclusion:** This study provides evidence of hippocampus subfields volumes reductions in SSc patients when compared to controls and was associated with