OP0140

PATTERN AND INFLUENTIAL FACTORS IN PROMOTING TREAT-TO-TARGET (T2T) FOR FOLLOW-UP RA PATIENTS WITH A RHEUMATOLOGIST-PATIENT INTERACTIVE SMART SYSTEM OF DISEASE MANAGEMENT (SSDM): A COHORT STUDY FROM CHINA

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Background: Treat-to-Target (T2T), achieving a DAS28 score lower than 2.6 (remission, Rem) or below 3.2 (low disease activity, LDA), is the main management strategy recommended by ACR and EULAR. The Smart System of Disease Management (SSDM) is an interactive mobile disease management tool, including the doctors' and patients' application system. The patients can perform self-evaluation, including DAS28, morning stiffness duration (MSD) and HAQ, and enter medical records (including medication and laboratory test results) through the mobile application. The data synchronises to the mobiles of authorised rheumatologists through cloud data base and advices could be delivered.

Objectives: The objective of this study is to evaluate the patterns of T2T and related influential factors among RA patients after applying SSDM in real world.

Methods: Patients were registered through downloading the SSDM application, then were trained to master SSDM by health professionals in clinics. The first assessment for DAS28 were performed as baseline. The patients were required to perform repeated assessments once a month after leaving clinics.

Abstract OP0140 – Table 1 Results at baseline and in the final follow up from 2,264 patients with RA

	Baseline Total (2,264)	Achiever of T2T (908, 40%)		Failure of T2T (1,356, 60%)	
		Maintainer of T2T 643 (71%)	Relapser 265 (29%)	Maintaining failure of T2T 835 (62%)	Achiever of T2T 521 (38%)
Age (years): mean ± SD		49.21 ± 13.38	48.82 ± 13.70	50.99 ± 14.02	48.45 ± 13.82
Disease duration (months): mean ± SD		61.35 ± 86.11	63.98 ± 84.11	61.96 ± 72.49	65.87 ± 85.42
Times of patient self-evaluation and data entry: mean ± SD		5.29 ± 1.39	2.81 ± 1.20*	2.95 ± 1.44	5.38 ± 1.45*
DAS28: mean ± SD	Baseline	2.28 ± 0.61	2.48 ± 0.58	4.87 ± 1.16	4.33 ± 0.94
	Final follow up	2.15 ± 0.63	4.14 ± 0.84	4.51 ± 0.98	2.34 ± 0.60
MST median (IQR), mean ± SD	Baseline	0(0-0)	0(0-10)	29.16 ± 34.26	15.26 ± 20.25**
	Final follow up	0(0-2)	18.15 ± 22.14	13.93 ± 22.16***	0(0-5)
HAQ: median (IQR), mean ± SD	Baseline	0(0-0)	0(0-1)	4.68 ± 3.52	1.98 ± 2.15**
	Final follow up	0(0-0)	3.26 ± 2.47	2.18 ± 2.25***	0(0-0)

DAS28: disease activity score in 28 joints; HAQ: health assessment questionnaire; MSD: morning stiffness duration.

*: P<0.01; **: P<0.001; One-way analysis of variance was used for comparisons in different groups.

†††: P<0.001; One-way analysis of variance was used for comparisons in the same group between baseline and final follow up.

Results: From Jun 2014 to Jan 2018 2,264 RA patients from 154 hospitals across China were followed up for more than 6 months through SSDM, and the results at baseline and in final follow up were shown in table 1. The rate of T2T achievers were 40% (908/2,264) at baseline, and improved significantly to 51% (1,164/2,264) after 6 month follow up, p<0.05. Among T2T achievers at baseline, 71% (643/908) maintained T2T, 29% (265/908) relapsed. Compared with relapsers, T2T maintainers performed more self-evaluation and data entry (5.29 vs 2.81, p<0.01). Among patients failed to achieve T2T at baseline, 38% (521/1,356) achieved T2T after 6 months. Comparing with 6 month failure (835/1,356), new T2T achievers got shorter MSD (15.26±20.25 vs 29.16±34.26 min, p<0.001), lower HAQ score (1.98±2.15 vs 4.68±3.52, p<0.001) at baseline, performed more times of self-evaluation and data entry (5.38 vs 2.95, p<0.01). However, even in

patients of 6 month failure, the MSD and HAQ score were improved significantly in final follow up comparing with those at baseline (13.93±22.16 vs 29.16±34.26, p<0.001; 2.18±2.25 vs 4.68±3.52, p<0.001, respectively).

Conclusions: After proactive disease management via SSDM for more than 6 months, the rate of T2T in RA patients increased significantly. The patients who perform more self-evaluations through SSDM had lower probability of relapse and higher T2T maintaining and achievement. SSDM is a valuable tool for long term RA follow-up through empowering patients. Future RCT of improving T2T outcome through intervention of above influential factors with SSDM is warranted.

Disclosure of Interest: None declared

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Quickly emerging: science in SSc, myositis and related syndromes

OP0141

ULTRASOUND DIAGNOSTIC AND PREDICTIVE VALUE OF INTERSTITIAL LUNG DISEASE IN SYSTEMIC SCLEROSIS. DIAGNOSTIC AND PREDICTIVE VALUE OF ULTRASOUND IN THE ASSESSMENT OF INTERSTITIAL LUNG DISEASE

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Background: Interstitial lung disease (ILD) is a common complication of Systemic Sclerosis (SSc) and frequently may be cause of death of patients. High resolution computed tomography (HRCT) is the reference imaging tool for the assessment of ILD; however, its use may be limited for both ionising radiation and costs. In this way, pulmonary ultrasound (US) is revealing interesting potential in the assessment of ILD.

Objectives: To determine the validity of pulmonary US in detecting subclinical ILD in SSc and to determine its predictive value for detecting disease progression.

Methods: We included 133 SSc patients ≥ 18 years-old without respiratory symptoms. Individuals with previous diagnosis of ILD or other pulmonary diseases were excluded. A rheumatologist performed the Borg scale dyspnea index, Rodnan skin score (RSS) and lung auscultation to confirm the subclinical respiratory status. Chest X-ray and respiratory function tests (RFT) were performed the same day in all patients. US was performed by a rheumatologist expert who was blinded to clinical assessment. To determine the concurrent validity HRCT was performed. Finally, serologic tests (anti-centromere, anti-Scl70) were obtained. HRCT findings were scored according to Warrick score, whereas US findings were classified according the previously proposed semiquantitative scale (0=normal, ≤5 B-lines; 1=slight, ≥6 and ≤15 B-lines; 2=moderate, ≤16 and ≥30 B-lines; 3=severe, ≥30 B-lines). In order to evaluate the inter-observer reliability, 50% of patients were assessed by 2 rheumatologists with different experience in US; both blinded to clinical data. A healthy control group matched for age and gender was included.

A follow-up including US, RFT and Borg scale was done every 3 months until 12 months.

Results: A total of 54 of 133 patients (40.6%) showed US signs of ILD in contrast to healthy controls (4.8%) (p=0.0001). The clinical and laboratory variables associated with ILD were: anti-centromere antibodies (p=0.005), Borg scale (p=0.004) and RSS (p=0.004). A positive correlation was demonstrated between the US and HRCT findings (p=0.001), confirmed also with the Chi square test (p=0.006). No association was shown with gender, age, disease duration, chest X-ray or RFT. Sensitivity and specificity of US in detecting ILD was 91.2% and 88.6% respectively. A Moderate inter-observer reliability of US findings was observed (kappa 0.50).

In follow-up, a total of 30 patients (22.6%) that demonstrated ILD during first evaluation, showed US worsening in their ILD status. Interestingly, 9 of those 30 patients (30%) became symptomatic by the Borg scale. The elapsed time in which progression of ILD or clinical conditions was documented was between 6 and 9 months of follow-up.

Conclusions: US showed a high prevalence of subclinical ILD in SSc patients. It demonstrated to be a valid, reliable and feasible tool to detect ILD in SSc and to follow-up its evolution. On the basis of our results we believe that US can be implemented as a screening tool for diagnosis of subclinical ILD in SSc.

Disclosure of Interest: None declared

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