became available at daily clinical practice on ^{Oct. 2016} in Japan. Diagnostic accuracy study of myositis-specific autoantibodies (MSAs) except for anti-Jo-1 antibody in daily clinical practice is scarce^[1].

Objectives: This study investigated the diagnostic utility of newly available myositis-specific autoantibodies (ELISA) in idiopathic inflammatory myopathy (IIM) suspected patients at a rheumatology clinic with muscle and skin biopsy as a reference standard.

Methods: This study is a retrospective, cross-sectional study. The electrical medical records of patients who visited the department of rheumatic diseases at ^{Tokyo} Metropolitan Tama Medical Centre between Nov. 2016 and Aug. 2017 were retrospectively searched for clinical variables and laboratory data. Patients with serum creatine phosphokinase (CK) greater than two-fold of normal upper limit (over 300 IU/ml) or suspected dermatomyositis skin rash were included. Anti-ARS antibodies, anti-Mi-2 antibody, anti-TIF1 γ antibody and anti-MDA5 antibody were measured by ELISA^[2-4]. Two muscle pathologists interpreted muscle biopsy. The skin biopsies with interface-dermatitis were considered positive. The biopsy results of patients who did not have biopsy procedure but whose symptoms and signs improved without immunosuppressive therapy were assumed negative. IIM diagnosis was based on 2017 EULAR/ACR classification criteria^[5]. We calculated likelihood ratio of MSAs for biopsy results and IIM diagnosis.

Results: Eight hundred and eighty-six new patients visited an outpatient clinic of rheumatic disease department and 38 patients met inclusion criteria. 14 patients were excluded because of apparent causes (1 each for sepsis, rhabdomyolysis, macro CK, serotonin syndrome, motor neuron disease, statin myopathy, SSc, idiopathic IP, seborrheic dermatitis, 3 for symptoms not compatible with IIMs.) and no biopsy results (2 patients). 17 (71%) of 24 patients analyses were female. The median age was 56.5 (IQR 41–65) years, median CK 658 (IQR 105–1866) IU/ml. 11 (46%) patients had the positive biopsy result (6 muscle biopsy and 5 skin biopsy) and IIM diagnosis. 10 (42%) patients were positive for MSAs (anti-ARS antibodies in 3, anti-Mi-2 antibody in 1, anti-TIF1 γ antibody in 2, anti-MDA5 antibody in 3 and double positive for anti-ARS and anti-MDA5 antibody in 1). The positive likelihood ratio of MSAs for the biopsy result and IIM diagnosis was ∞ (95% CI cannot be calculated). The negative likelihood ratio was 0.091 (95% CI 0.086–0.097).

Conclusions: Our analysis demonstrated that MSAs measured by ELISA efficiently differentiated biopsy-proven IIMs from other medical conditions at rheumatology daily practice.

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AB0823

PATIENTS WITH CONNECTIVE TISSUE DISEASE HAVE MORE ANXIETY IN COMPARISON WITH PATIENTS WITH OTHER RHEUMATIC DISEASES

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Background: Rheumatic diseases often coexists with psychological disorders. Psychological symptoms not only have a substantial negative impact on the quality of life, but also on the course and outcome of the chronic disorders.¹

Objectives: Our study was to investigate psychological disorders in Chinese patients with rheumatic diseases and to compare the differences of psychological disorders among different diseases.

Methods: Patients with rheumatic diseases were enrolled from July to December in 2017 in rheumatology department of the Third Affiliated Hospital of Sun Yat-sen University. Participants were required to complete a set of questionnaires and examinations, including demographic and clinical information, Zung self-rating anxiety scale (SAS), and Zung self-rating depression scale (SDS). The Statistical Package for Social Sciences (SPSS) software version 21 was used for all data management and analysis. The Mann-Whitney U test and Student's t test were used to compare patients with different rheumatic diseases and psychological disorders. Stepwise linear multiple regression was used to determine the contributors to SAS and SDS.

Results: Of all the 153 patients, 49 (32%) were male patients. 14.4% had only primary education, while 32% received education in university. Numbers of the patients were stated as follows. Lupus, 44; rheumatoid arthritis, 11; Sjogren's syndrome, 11; systemic sclerosis, 9; myositis, 7; vasculitis, 6; spondyloarthritis, 9; gout, 10; other diseases 46. Mean age was 37.64 $\pm$ 15.23 years. Mean disease

duration was 3.78 $\pm$ 5.07 years. Mean SAS scores were 43.44 $\pm$ 8.51, and mean SDS scores were 46.66 $\pm$ 12.43. 35 (22%) of the patients had anxiety, while 6 (3.9%) had moderate anxiety. 50 (32.7%) patients suffered from depression, of which 5 (3.3%) had severe depression, and 13 (8.5%) had moderate depression. Patients with connective tissue diseases had more anxiety (30.5%) than average score ($p < 0.05$), especially in patients with lupus. SDS ($B = 1.073$, $p < 0.001$), educational scale ($B = -2.147$, $p < 0.05$) contributed to SAS scores.

Conclusions: Psychological disorders could concur with rheumatic diseases, especially in connective tissue diseases. Physicians should be aware of psychological status in these patients.

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AB0824

EVALUATION OF THE DETECTION OF MYOSITIS-SPECIFIC ANTIBODIES BY LINEBLOT AS A TOOL FOR THE CHARACTERISATION OF A PROSPECTIVE MULTICENTER COHORT

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Background: Traditionally, the diagnosis of idiopathic inflammatory myopathies (IIM) is based on clinical findings, muscle enzyme levels, electromyography and biopsy. Newer approaches include the detection of myositis-specific autoantibodies (MSA), with MSA identified in about 50% of patients.

Today, several commercial platforms for MSA detection have become commercially available. In the context of the start-up of a prospective multicentre cohort, we evaluated the usefulness of a multiparameter line blot for the serological characterisation of patients with clinical suspicion of IIM.

Objectives: To evaluate the usefulness of a multiparameter line blot for the serological characterisation of patients with clinical suspicion of IIM.

Methods: A total of 225 samples (118 consecutive routine samples for which MSA were requested and 107 controls [50 systemic sclerosis (SSc), 29 systemic lupus erythematosus (SLE) and 28 rheumatoid arthritis patients (RA)]) was analysed on indirect immunofluorescence (HEp-2000, Immunoconcepts) and lineblot (MYO12 blot, D-Tek). All consecutive samples were retrospectively categorised by the treating medical specialist as definite IIM ($n = 16$), probable IIM ($n = 10$), immune mediated inflammatory disease (IMID) – myositis overlap not excluded ($n = 28$), myopathic features without IIM ($n = 1$), IIM excluded ($n = 44$), and lost from follow-up/no data available ($n = 19$). Data to calculate the EULAR/ACR probability score were also collected.

Results: MSA were detected in 12% of the 225 samples, showing no multiple reactivities. A sensitivity of 50% in the IIM patients (definite and probable $n = 13/26$ – based on judgement of the clinician) was observed, with the highest frequencies observed for anti-HMGCR (15%, $n = 4$), anti-Mi2 (12%, $n = 3$) and anti-Jo1 (12%, $n = 3$). Less frequent antibodies were anti-EJ ($n = 1$), anti-MDA5 ($n = 1$) and anti-NXP2 ($n = 1$). All these patients had a MSA-compatible clinical IIM subtype. The median minimal EULAR/ACR probability score was 97% (range 6%–100%, no biopsy data entry), with the lowest score observed in the anti-EJ patient. In contrast, MSA were also observed in 8 patients with no convincing clinical diagnosis of IIM or myositis overlap syndrome (anti-TIF1 γ in 4 [3 SSc and 1 SLE]; anti-SRP in 1 [1 RA]; anti-SAE in 3 [1 SSc, 1 RA and 1 IIM excluded], mostly showing low antibody titres ($n = 6/8$) and no compatible immunofluorescence pattern on HEp-2000 ($n = 7/8$). For 2 other positive samples the results were not conclusive (anti-PL7 in patient with myopathic features and anti-SRP in an unspecified IMID patient).

Conclusions: The detection of MSA by lineblot will be useful for the prospective serological characterisation of patients with clinical suspicion of IIM. Nevertheless, careful interpretation in correlation with the clinical findings and other technical examinations is necessary in case of low titres and absence of a compatible immunofluorescence pattern.

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