Background: Tacrolimus (TAC), an immunosuppressant, can be used in second-line maintenance therapy for interstitial lung disease (ILD) in patients with dermatomyositis (DM) [1]. Although some studies reported the clinical efficacy of initial high-trough levels of TAC in combination with GC and IVCY in induction therapy for severe DM-ILD [2], there have been no useful clinical tools for deciding suitable initial dose of TAC. Genotype of polymorphisms in cytochrome P450 (CYP) 3A5 enzyme was reported to play an important role in pharmacokinetics of TAC [3], and we made a formula for deciding initial dose of TAC according to CYP3A5 genotypes in our previous study.

Objectives: In our previous study (retrospective study), we set the target trough according to the severity for nine DM-ILD patients, six of whom were CYP3A5 *3/*3 and investigated the dose of TAC that could attain the trough using their CYP3A5 genotyping. Using these results, we developed a formula for deciding initial daily dose of TAC (target trough*weight / [(151.1, if CYP3A5 *3/*3) or (86.5, if CYP3A5 *1 allele)]).

Methods: We introduced TAC for new six DM-ILD patients who visited our hospital between November 2019 and May 2020 (prospective study). The starting dose of TAC was decided by using the formula. We assessed the association between predicted and observed trough concentration of TAC at first measurement date (from day 2 to day4), using linear regression analysis. We also assessed the days for attaining the target trough concentration between the patients using the formula (prospective group) and six patients with CYP3A5 *3/*3 (retrospective group).

Results: CYP3A5 genotype of all six DM-ILD patients were *3/*3 and underwent the TAC treatment by using the formula. The predicted and observed trough concentration of first measurement date were significantly correlated in the patients ($r = 0.897$, $p = 0.0041$) (Fig.1). Compared with our retrospective study, target trough was more quickly attained in patients of the prospective study (Fig.2).

Conclusion: The formula which we made for attainment target trough concentration based on CYP3A5 genotype was useful for deciding the starting dose of TAC. We also showed that we could attain the target trough concentration at early stage of initial treatment by using the formula.

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Figure 1. Correlation of predicted and observed tacrolimus trough concentration at first measurement in the prospective study

Figure 2. Days to attain the target trough concentration of tacrolimus in the prospective group and the retrospective group

Disclosure of Interests: None declared

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POS0869

PREDICTIVE VALUE OF ANTI-INTERFERON-INDUCIBLE PROTEIN 16 ANTIBODIES FOR DIGITAL ULCERS OF SYSTEMIC SCLEROSIS

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Background: Interferon-inducible protein 16 (IFI-16) is constitutively expressed in vascular endothelial cells and can inhibit the proliferation of human endothelial cells and the formation of capillary-like structures *in vitro*. Anti-IFI-16 antibodies were reported in 21%-29% of patients with systemic sclerosis (SSc) and were associated with digital vascular events in a few retrospective studies.

Objectives: To evaluate the presence and the clinical implication of anti-IFI-16 antibodies in Chinese SSc cohort, focusing on the associations with vasculopathy indexes, and to investigate the predictive value of anti-IFI-16 antibodies for the development of digital ulcers (DUs) in SSc prospectively.

Methods: Patients with SSc presenting to our center between July 2018 and September 2018 were prospectively enrolled. Serum from 42 SSc patients and 42 age- and sex-matched healthy controls were analyzed for anti-IFI-16 antibodies by enzyme-linked immunosorbent assay (ELISA), and was considered positive if the optical density (OD) value was above the mean OD of controls plus two standard deviations. Tissue immunofluorescence was used to evaluate the expression of IFI16 in skin biopsy samples obtained from SSc patients and normal controls. At baseline, nailfold video-capillaroscopy was performed to assess nailfold capillary density of SSc patients. Power Doppler ultrasound was used to grade finger pulp blood flow (0-no observed flow; 1-decreased flow; 2-normal flow), and to measure ulnar and radial artery blood flow and resistive index (RI). All patients were followed up for 6 months to see whether they experienced new onset or recurrent DUs. The association of anti-IFI-16 antibodies with DUs was analyzed using logistic regression.

Results: Of the 42 SSc patients, 8 (19.0%) were positive for anti-IFI-16 antibodies. Immunofluorescence of skin biopsy samples from SSc patients exhibited enhanced staining of IFI-16 in the dermis, and colocalization with endothelial marker CD31. SSc patients who were positive for anti-IFI-16 antibodies showed higher ulnar artery RI at baseline (0.95 ± 0.09 vs. 0.86 ± 0.09 , $p = 0.015$), while no significant differences were found for other vascular parameters, nor for clinical or demographic profiles. Within 6-month follow-up, 14 (33.3%) patients experienced new-onset or recurrent DUs. Univariate logistic regression revealed the presence of DUs at enrollment ($p = 0.009$), anti-IFI-16 antibody ($p = 0.012$), finger pulp blood flow ($p = 0.027$), and ulnar artery RI ($p = 0.008$) could be the predictors for the development of DUs. Multivariate analysis further identified DUs at enrollment (odds ratio [OR]: 10.85; 95% confidence interval [CI]: 1.61-73.18; $p = 0.014$) and anti-IFI-16 antibody (OR: 15.00; 95% CI: 1.13-199.18; $p = 0.040$) as independent risk factors. Among patients without DUs at enrollment, new-onset ulcers occurred in 80% (4/5) and 4.5% (1/22) of those with and without anti-IFI-16 antibody, respectively ($p = 0.001$).

Conclusion: Anti-IFI-16 antibody is associated with vasculopathy in SSc and could be used as a novel biomarker for indicating the development of DUs.

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Variable	OR (95% CI)	P value
DU at enrollment	10.85 (1.61-73.18)	0.014
Anti-IFI16 antibody	15.00 (1.13-199.18)	0.040
Finger pulp blood flow (per 1 grade)	0.16 (0.01-2.22)	0.172
Ulnar artery RI (per 0.01 unit)	1.29 (0.41-4.08)	0.660

Figure 1. Multivariate logistic analysis for new or recurrent digital ulcers.

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POS0870

CLINICAL CHARACTERIZATION OF PORTUGUESE PATIENTS WITH ANTISYNTHEASE SYNDROME

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