to PFTs and HRCT thorax which plays a role after anatomical changes appear in the interstitium. The basic underlying pathology being inflammation in the alveolar epithelium, aerosol scintigraphy assesses the rate of clearance at this level, thereby helping with early diagnosis.

Aims

1. To assess the alveolar capillary permeability in dcSSc patients using Tc 99m DTPA aerosol scintigraphy.
2. To identify the association of DTPA clearance rates with spirometry, HRCT, six-minute walk distance (6MWD), modified rodnan skin score (mRSS), nail fold capillaroscopy (NFC), serum KL-6, SP-D, CA 15-3 and Saint George's Respiratory Questionnaire (SGRQ).

Methodology A cross-sectional study was done between December 2018 and December 2020 at a tertiary care hospital in South India after institutional ethics committee clearance. Cases of dcSSc satisfying the ACR/EULAR 2013 criteria were recruited into the study after obtaining consent. They underwent aerosol scintigraphy, HRCT thorax, spirometry, mRSS, NFC, 6MWT, SGRQ and serum testing for KL-6, SP-D and CA 15-3.

Results Of the total participants (n=58), the mean DTPA clearance rate ($T_{1/2}$) was found to be 49.6 ± 25.7 minutes. ROC analysis determined 59.5 minutes as the cut off for

detecting the presence of ILD (sensitivity 81.2%, specificity 66.7% compared to HRCT). The combination of $T_{1/2}$, KL-6 and CA 15-3 had a higher sensitivity (89.6%) and specificity (76.9%) in detecting ILD early. Clearance $T_{1/2}$ correlated positively with Warrick CT score, 6MWD and negatively with FVC, mRSS and serum CA 15-3.

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PNEUMOCYSTIS JIROVECI PNEUMONIA PROPHYLAXIS IN PATIENTS TREATED WITH MYCOPHENOLATE MOFETIL FOR INTERSTITIAL LUNG DISEASE

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Background Incidence of *Pneumocystis jirovecii* Pneumonia (PJP) among immunosuppressed individuals who are HIV-negative is rising in the UK.¹ There is a lack of evidence for whether patients with interstitial lung disease (ILD) treated with mycophenolate mofetil (MMF) benefit from PJP prophylaxis. This may increase variability in clinical practice between centres or clinicians. If PJP prophylaxis isn't supported by the evidence, this may represent unnecessary use of antibiotics.

Aims To identify whether ILD patients treated with MMF were less likely to develop PJP or require antibiotics for lower respiratory tract infection (LRTI) while on PJP prophylaxis.

Methods We performed a retrospective audit of patients at The Newcastle upon Tyne Hospitals NHS Foundation Trust who were treated with MMF for ILD. We recorded the proportion of patients given prophylaxis, the agents used, and the incidence of PJP and LRTI requiring antibiotics (including GP records) in this cohort.

Results Data was collected on 105 patients who were currently prescribed MMF or had been in the past 5 years. 75/105 (71.4%) were female and the median age was 68 years old. Median treatment length with MMF was 21 months. The majority of patients were diagnosed with chronic hypersensitivity pneumonitis (57.1%) or connective tissue disease-related ILD (16.2%). 36/105 (34.3%) were prescribed prophylaxis with co-trimoxazole, azithromycin or dapsone throughout the period studied, while 6/105 (5.7%) were prescribed prophylaxis for some but not all of the time that MMF was prescribed.

No patients in the cohort developed PJP while prescribed MMF regardless of prophylaxis use. Significantly more patients (18/42 [42.9%]) received antibiotics for LRTI while prescribed PJP prophylaxis compared to those not concurrently prescribed prophylaxis (14/69 [20.3%], $p = 0.011$, χ^2 test).

Conclusion Results from this cohort suggest that PJP infection in patients prescribed MMF for ILD is relatively uncommon regardless of prophylaxis use. There may be an increase in the incidence of LRTIs with PJP prophylaxis, although further study is required to determine this and the value of PJP prophylaxis in this patient group.

REFERENCE

1. Maini R, et al. Increasing pneumocystis pneumonia, England, UK, 2000–2010. *Emerging Infectious Diseases*, 2013;19(3):386–392.

Abstract P151 Table 1 Diagnostic value of DTPA clearance half-life, serum biomarkers and their combination in SSC-ILD

DTPA clearance half time	
Mean DTPA clearance rate ($T_{1/2}$) (mins)	48.11±23.99
AUC (95% CI)	0.646 (0.455 – 0.837)
Cut off value (mins)	49.625
Sensitivity (%)	68.6
Specificity (%)	60
Serum biomarker	
Serum KL-6, ng/ml [median (IQR) (range)]	0.19 (0.534) (0.029 - 4.123)
Serum SP-D, ng/ml [median (IQR) (range)]	2.24 (39.125) (0.1 - 683.728)
Serum CA 15-3, U/ml [median (IQR) (range)]	187.87(226.12) (16.22–757.67)
Serum KL-6	
AUC (95% CI)	0.798 (0.686 – 0.910)
Cut off value, ng/ml	0.1875
Sensitivity, %	62.5
Specificity, %	92.3
Serum SP-D	
AUC (95% CI)	0.76 (0.631 – 0.898)
Cut off value, ng/ml	155.61
Sensitivity, %	66.7
Specificity, %	76.92
Serum CA 15-3	
AUC (95% CI)	0.764 (0.633 – 0.896)
Cut off value, U/ml	122.61
Sensitivity, %	79.2
Specificity, %	61.5
ROC model	
$T_{1/2}$, serum KL-6 and CA 15-3	
AUC (95% CI)	0.899
Sensitivity, %	89.6
Specificity, %	76.9
P value	0.00
Likelihood ratio	3.88