patients. To date, 68.9% have not received regular anti-microbial therapy. 19 (21.1%) are on long term anti-bacterials, and 7 (7.8%) are being treated with specific anti-NTM therapy (5 of these MAC). Over the two year period 483 pulmonary samples have been tested for mycobacteria; at a mean frequency of 5.4 samples per patient, with approximately one in three being NTM positive.

Conclusion Different microbes are frequently isolated on serial lung sampling from patients with NTM. Clinicians often utilise a treatment strategy that focuses on organisms other than NTM to control symptoms. The value of this approach requires longer term assessment, but highlights the importance of systematic, microbial surveillance cultures in pulmonary NTM management.

P114 NON-TUBERCULOUS MYCOBACTERIA–AN INCREASING PROBLEM WITH MANY COMPANIONS

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Introduction Infections secondary to non-tuberculous mycobacteria (NTM) are emerging with increasing frequency in various clinical settings. The determination of the clinical and prognostic significance of NTM isolates remains challenging and, in the absence of large trials, the evidence around the different therapeutic options is limited[1]. We aimed to identify the number of patients with single/multiple NTM isolates in our hospitals and evaluate their complexity with respect to coexistent microbiology.

Method A retrospective case review of patients in whom NTM were isolated over the last two years in two large teaching hospitals.

Results 195 patients were diagnosed with an NTM within the specified time period. Of those, 29 patients (14.8%) had cystic fibrosis (CF) and 11 patients (5.6%) were HIV-positive.

In the non-CF population, in 112 of 166 patients (67.5%) NTM were isolated in 1 sample, in 24 patients (14.5%) in 2 samples and in 30 patients (18%) in 3 or more samples. In 8 patients (4.8%) 2 or more different NTM species were isolated in the same samples. The NTM source was: sputum in 130 patients (78.3%), bronchial washings in 23 patients (13.8%) and other pulmonary/non-pulmonary sites in 13 patients (7.9%). Table 1 shows the NTM species isolated. 61 patients (36.7%) were co-infected with other organisms; most commonly with Pseudomonas aeruginosa, Staphylococcus aureus and Haemophilus influenzae. Co-infection with other organisms was not related to the NTM species, or to the number of NTM isolates. 114 patients (68.7%) were reviewed by a respiratory physician; this included all patients with 3 or more NTM isolates. 122 patients (73.5%) underwent CT imaging. 36 patients (21.7%) were commenced on treatment.

Abstract P114 Table 1. NTM species isolated and number of patients treated

Mycobacterium species	Number of patients growing NTM	Number of patients treated
M. avium complex (MAC)	36	10
M. fortuitum	34	2
M. kansasii	28	17
M. gordonae	22	1
M. xenopi	17	2
M. peregrinum	12	0
M. chelonae	7	1
M. abscessus	6	1
M. mucogenicum	4	0
M. malmoense	4	1
M. scrofulaceum	2	0
M. hassiacum	1	0
M. szulgai	1	1
M. smegmatis	1	0
M. marinum	1	0
M. neoaurum	1	0

Conclusion NTM infection is an increasing and often complex challenge in respiratory medicine that requires specialist input. Further studies are needed to clarify whether co-infection with other organisms is related to the nature (e.g. bronchiectasis, cavitation) or severity of respiratory disease.

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P115 EPIDEMIOLOGY, CHARACTERISTICS AND MANAGEMENT OF NON TUBERCULOUS MYCOBACTERIA IN A DEVON POPULATION

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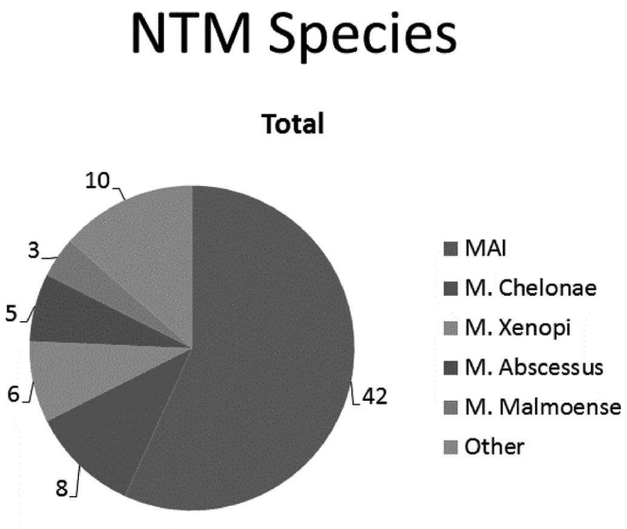
Introduction and Objectives Non-Tuberculous Mycobacteria (NTM) are ubiquitous species typically residing in soil and water. Their presentation as pathogens in disease is believed to be rising with the most common site of isolation being pulmonary. We have examined the epidemiology and characteristics of NTM presenting to our clinic over the period 2005–2012.

Method Our database, including all patients with at least one identification of an NTM during the period of 2005–2012, was reviewed. Data presented includes all incidences documented from 2009 onwards, with additional data from before 2009 used to gain further demographic information about the population. Those who were non-resident in the area were excluded.

The data was collected from Clinical Letters, Radiology and Pathology records, with data being reviewed by the lead investigator and one other in cases where information was uncertain.

Results Data was obtained from 74 new isolations, with a total of 11 different species of NTM identified. Patients presenting had a median age of 68 and a range of 8–88 years. 39(53%) were female and 46 (62%) were "one-off" isolates. M. Avium-intracellulare (MAI) was the most frequently reported isolate (42 cases, 57%) followed by M. Chelonae (8, 11%) and M. Xenopi (6, 8%). The majority (68, 92%) of isolates were pulmonary with 45(66%) of these found in standard sputum culture. Most frequently recorded co-morbidities were bronchiectasis (35 cases, 47%) and COPD (20, 27%). Of the total of 74 cases only 24 (32%) had received treatment by the time of our survey. The overall rates for eradication and subsequent relapse in those treated patients were 50% and 25% respectively for the total population and 57% and 38% for those with MAI. At completion of the study the mortality rate within 2 years of the first positive sample was 18%.

Conclusion In keeping with previous UK surveys, the majority of isolates in our population were pulmonary with MAI being the most frequently seen species of NTM. In those in whom treatment was indicated low eradication rates and significant relapse rates confirm complexity of managing this population of patients.



Abstract P115 Figure 1

COPD: Causes and Consequences

P116 OBSERVATIONAL STUDY TO CHARACTERISE 24-HOUR COPD SYMPTOMS: CROSS-SECTIONAL RESULTS FROM THE ASSESS STUDY

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Introduction and Objectives Little is known about the 24-hour profile of COPD symptoms. This study assessed the frequency/severity of 24-hour symptoms and their impact on patients' well-being.

Methods This cross-sectional, observational study was conducted in patients with stable COPD. Baseline night-time, early-morning and day-time symptoms (symptom questionnaire), dyspnoea (modified Medical Research Council dyspnoea scale [mMRC]), health status (COPD Assessment Test [CAT]), anxiety/depression levels (Hospital Anxiety and Depression Scale [HADS]) and sleep quality (COPD and Asthma Sleep Impact Scale [CASIS]) were assessed. Primary endpoint: baseline frequency, severity and inter-relationship of night-time, early-morning and day-time symptoms; secondary endpoints: relationship between 24-hour symptoms and dyspnoea, health status, anxiety/depression and sleep quality.

Results 727 patients were recruited from eight countries: 65.8% male, mean ± SD age 67.2 ± 8.8 years, mean ± SD% predicted FEV_1 52.7 ± 20.6%. Early-morning/day-time symptoms were most frequent; however night-time symptoms were common (Table). Symptom severity was comparable during the night-time, early-morning and day-time. In the week prior to baseline, 56.7% patients had symptoms throughout the 24-hours (79.9% in 2 or 3 parts of the day). Breathlessness was most common (71.4% patients); its prevalence increased throughout the 24-hours (32.1% night-time, 51.6% early-morning, 65.2% day-time).

Dyspnoea, health status, anxiety/depression and sleep quality were worse in patients with night-time, early-morning or day-time symptoms versus patients without symptoms in each period (all $p < 0.001$). Most patients with more severe dyspnoea (mMRC scale ≥2) had 24-hour symptoms (range 61.5–68.2%); patients with 24-hour symptoms had the worst health status (mean CAT score 20.0 vs range 8.1–14.9 in all other patients). Patients with any combination of night-time/early-morning symptoms had the highest anxiety (mean HADS scores 6.7–7.5 vs 3.6–5.8 in patients without this combination); depression levels were lowest in patients with no symptoms/only early-morning symptoms (mean HADS scores 4.2–5.4 vs 6.5–7.8 in all other patients). Patients with any night-time symptom had worse sleep quality than patients without night-time symptoms (mean CASIS scores 41.6–51.1 vs 31.6–35.5).

Conclusions Most patients had COPD symptoms throughout the 24-hours. Dyspnoea, health status, anxiety/depression levels and sleep quality were significantly worse in patients who had symptoms in any part of the day.

Abstract P116 Table 1. Prevalence and severity of COPD symptomsthroughout the 24-hour day

N=727	Night-time	Early-morning	Day-time
Prevalence of COPD symptoms, n (%)			
≥3 times during the past week	312 (42.9)	455 (62.6)	427 (58.7)
≥3 times during a typical week[a]	378 (52.0)	488 (67.1)	468 (64.4)
≥1 COPD symptoms during the past week	458 (63.0)	592 (81.4)	601 (82.7)
Severity of COPD symptoms,[b] n (%[c])			
Mild	191 (46.7)	252 (44.1)	254 (43.1)
Moderate	175 (42.8)	250 (43.8)	272 (46.2)
Severe	39 (9.5)	61 (10.7)	59 (10.0)
Very severe	4 (1)	8 (1.4)	4 (0.7)

[a]A typical week refers to a week that the patient considers is most usual for them during the previous month
[b]During the previous week
[c]Percentage based on patients who reported symptoms in the previous week and provided data for symptom severity

P117 COMPARISON OF RESPIRATORY-RELATED QUALITY OF LIFE PULMONARY REHABILITATION OUTCOMES AND DURATION OF TREATMENT IN ACUTE AND COMMUNITY SETTINGS

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Introduction and Objectives NICE guidance recommends that patients are offered between six and twelve weeks of pulmonary rehabilitation as effective treatment option for chronic obstructive pulmonary disease (NICE, 2010). While there is good