Results 233 children were followed for a median of 2.0 (1.7–2.3) years. The median (IQR) age was 8.0 (5.0–12.2) years. 71 children isolated PA during the study period. The incidence rate (95% CI) of new PA infections was 0.15 (0.10–0.22) cases per patient year for those that had never previously isolated PA and 0.19 (0.13–0.27) cases per patient year for those that had been free from PA for >12 months. This rate varied between 0.08 (0.04–0.18) and 0.28 (0.14–0.49) cases per patient year at the 8 recruiting centres. 42% of children were asymptomatic at the time of PA acquisition. The median (IQR) number of antibiotic courses per patient year varied between the centres: 0.6 (0.2–1.3) to 3.6 (3.1–4.2) for oral and 0.0 (0–0) to 0.4 (0–1.2) for intravenous.

Conclusions This is the first prospective study to report the incidence of new PA infection in a large cohort of children with CF, considered to be free of PA airway infection. Incidence rate was higher in children who had isolated PA previously. The variation between centres is not easily explained and needs further investigation.

Acknowledgments We would like to thank the Principal Investigators, research nurses and co-ordinators at each of the recruiting centres as well as the children and their families.

P198 NEW APPROACHES TO THE CULTURE OF MYCOBACTERIUM ABSCESSUS COMPLEX FROM PATIENTS WITH CYSTIC FIBROSIS

[1]JE Foweraker, [1]S Jalili, [1]V Athithan, [1]D Grogono, [2]MC Curran, [1]RA Floto. *[1]Papworth Hospital NHS Foundation Trust, Cambridge, UK; [2]Cambridge Clinical Microbiology and Public Health Laboratory, Cambridge, UK*

10.1136/thoraxjnl-2014-206260.327

Introduction M.abscessus complex (Mab) are Rapid Growing Mycobacteria (RGM) that can cause severe infection. Prevalence is increasing and a recent study using whole genome sequencing showed cross infection between Cystic Fibrosis patients. Frequent surveillance for Mab infection may allow earlier diagnosis and prevent spread.

Automated broth (e.g. MGIT), is a sensitive rapid method for mycobacterial culture. Decontamination is needed to kill other bacteria and yeasts before culturing CF sputa in MGIT, but decontamination may reduce Mab numbers.

Other possibilities include chlorhexidine decontamination which yields more Mab but is incompatible with MGIT. Some mycobacteria grow directly from sputum on *Burkholderia cepacia* selective agar (Bcc) after extended incubation, without prior decontamination.

The aim of this study was to improve Mab culture from CF sputum.

Methods We compared MGIT culture of CF sputa with extended incubation of Bcc used in the routine laboratory. We compared growth of 30 known Mab on 3 formulations of Bcc and 2 Middlebrooke selective agars. We took 12 sputa from 9 CF patients with Mab infection and compared MGIT with culture on selective agars or chlorhexidine decontamination followed by culture onto non selective agar. Mycobacteria were identified by the National Mycobacterium Reference Laboratory and an in house PCR.

Results Eighteen of 515 CF sputa grew RGM (9 on Bcc agar and MGIT, 3 MGIT alone, 4 Bcc alone and 2 on Bcc with no MGIT culture). Contamination with other bacteria and fungi made it extremely difficult to see RGM on the routine Bcc.

Thirty sequenced M.abscessus abscessus, M.bolletii and M. massilliense all grew on the 3 commercial Bcc and 2 Middlebrooke agars.

One Bcc and one Middlebrooke agar successfully cultured RGM from all 12 sputa with fewest contaminants. Chlorhexidine decontamination and blood agar was effective but labour-intensive. Only 8 of 12 MGIT cultures grew RGM.

There was no difference in time to positive culture between agar and MGIT.

Conclusion Culture onto selective agar may be more sensitive than MGIT. It is quantitative and provides pure culture for identification, typing and susceptibility testing.

This may be a sensitive cost-effective way to screen sputa from patients at risk.

P199 MOLECULAR ANALYSIS DEMONSTRATES SHARED STRAINS OF MYCOBACTERIUM ABSCESSUS ISOLATES IN CYSTIC FIBROSIS PATIENTS ATTENDING A SINGLE CENTRE

[1]HD Green, [1]Rowland Bright-Thomas, [1]PJ Barry, [2]N Woodford, [3]B Isalska, [1]A Horsley, [2]D Kenna, [1]AM Jones. *[1]Manchester Adult Cystic Fibrosis Centre, University Hospital of South Manchester, Manchester, UK; [2]Public Health England, Antimicrobial Resistance and Healthcare Associated Infections Reference Unit, London, UK; [3]Clinical Microbiology, University Hospital of South Manchester, Manchester, UK*

10.1136/thoraxjnl-2014-206260.328

Introduction and objectives The *Mycobacterium abscessus* complex is an emerging group of pathogens in cystic fibrosis (CF), which may cause cross infection. The aim of this study was to determine whether CF patients infected with M.abscessus attending a single UK adult CF centre harboured unique or shared strains of M. abscessus.

Methods Isolates were from 12 patients attending a single adult CF centre, who yielded one or more positive sputum cultures for *M. abscessus* complex during the period January 2010 to August 2013. Isolates were identified to subspecies level using hsp65-rpoB concatenated sequence cluster analysis. Variable Number Tandem Repeat (VNTR) analysis was used to compare these isolates and determine whether two or more patients were infected with the same strain.

Results 11 isolates were identified as *M. abscessus susbp. abscessus*. VNTR analysis demonstrated 2 clusters of 6 and 2 patients carrying the same strains of *M. abscessus susbp. abscessus*, both

Abstract P199 Table 1 Mycobacterium abscessus cluster sequence analysis and Variable Number Tandem Repeat profiling results

Patient	*M.abscessus* subspecies	VNTR Profile
1	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
2	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
3	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
4	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
5	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
6	*abscessus*	2+, 5+, 3, 6, 2, 5, 1+, 2+, -
7	*abscessus*	3+, 4+, 3, -, 4, 3+, 2+, 2+, 2
8	*abscessus*	3+, 4+, 3, 2, 4, 3+, 2+, 2+, 2
9	*abscessus*	2+, -, 3, 4, 2, 5, 1+, 2+, -
10	*abscessus*	-, 5+, 2, 2+, 4, 5, 1+, 3, 2
11	*abscessus*	1+, 4+, 2, 2, 4, 3+, 2+, 2+, 2
12	*bolettii*	2+, -, 5, 5, 4, 3+, 1+, 2, 1+

Corrections

P198 - withdrawn

JE Foweraker, S Jalili, V Athithan, *et al*. P198 New approaches to the culture of Mycobactrium abscessus complex from patients with cystic fibrosis. *Thorax* 2014;69 (Suppl 2):A163. doi: 10.1136/thoraxjnl-2014-206260.327

Thorax 2015;**70**:180. doi:10.1136/thoraxjnl-2014-206260.327corr1