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CLINICAL OUTCOMES OF ASPERGILLUS DISEASE PHENOTYPES IN ADULT CYSTIC FIBROSIS PATIENTS

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Objectives Aspergillus disease in cystic fibrosis (CF) patients has been proposed to encompass 4 classes: Class 1; No disease, Class 2; Allergic Bronchopulmonary Aspergillosis (ABPA), Class 3; Aspergillus sensitised, Class 4; Aspergillus Bronchitis.¹ The clinical consequence of non-ABPA Aspergillus disease in CF is not fully understood. We evaluated the survival of patients with different classes of Aspergillus disease who were diagnosed as part of Baxter's work between 2008–2011 in order to determine the clinical consequences of the different phenotypes of disease.

Methods A retrospective case note analysis was undertaken for all 129 patients from the Baxter et al. patient cohort. Survival outcomes were documented for all patients, and baseline demographics including age, gender, FEV₁, BMI and co-pathogens were collected. Any patients who received double lung transplantation or who moved away from the unit during this time were identified. The best FEV₁ for each year of follow up, FEV₁ closest to annual consent date, and BMI were collected for each year of follow in every patient until the current day, or date of death, transplant, or move away. Data was tested for normality and between group comparisons were calculated with one-way anova. Survival was assessed with Kaplan Meier and re-analysed with Cox Regression to adjust for other prognostic factors.

Results There was no statistical significance in survival rates between the 4 classes of Aspergillus disease (P value 0.521). The sole predictor of survival was baseline FEV₁% predicted at time of diagnosis (P value<0.001).

Conclusions There was no statistically significant difference in survival for CF patients with Aspergillus disease over 6–8 years follow up. Further work is being undertaken to continue monitoring and reclassify disease phenotype in this patient cohort.

REFERENCE

1. Baxter et al. *J Allergy Clin Immunol* 2013;132(3).

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AN OPEN-LABEL EXTENSION (EXT) STUDY OF LUMACAFTOR/IVACAFTOR (LUM/IVA) THERAPY IN PATIENTS AGED 6 TO 11 YEARS WITH CYSTIC FIBROSIS (CF) HOMOZYGOUS FOR F508DEL-CFTR

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Objective Lumacaftor/Ivacaftor (LUM/IVA) was well tolerated and had beneficial effects on lung function, sweat chloride (SwCl), and body mass index (BMI) in a 24 week, open-label study (VX15–809–011B [011B]) in patients aged 6 to 11 years with cystic fibrosis (CF) homozygous for *F508del*. We report 36 weeks of additional safety and efficacy data in an

ongoing 96 week extension (EXT) study (VX15–809–110; NCT02544451).

Methods Eligible patients from 011B received LUM 200 mg/IVA 250 mg every 12 hours (q12h; 6–11 years) or LUM 400 mg/IVA 250 mg q12h (≥ 12 years). Primary endpoint was safety. Secondary endpoints included changes in SwCl and lung clearance index based on lung volume turnover required to reach 2.5% of starting N₂ concentration (LCI_{2.5}) through week 24, and BMI and percent predicted FEV₁ (ppFEV₁) through week 36.

Results Of the 49 enrolled patients (mean age [SD], 9.2 [1.48] years), 47 completed 36 weeks of the EXT study. Adverse events (AEs) were reported in 91.8% of patients (34.7% mild; 49.0% moderate). Common AEs (cough, n=18; infective pulmonary exacerbation, n=18) were consistent with expected CF manifestations. Eight (16.3%) patients had serious AEs. Four (8.2%) patients had ≥ 1 respiratory AE (2 wheezing; 1 bronchial hyper-reactivity; 1 dyspnea; 1 respiration abnormal). Six (12.2%) patients had elevated alanine aminotransferase or aspartate aminotransferase (≥ 3 to $5 \times$ upper limit of normal [ULN], n=3; ≥ 5 to $8 \times$ ULN, n=1; $\geq 8 \times$ ULN, n=2). No drug discontinuations were due to AEs. Changes from 011B baseline (BL) in ppFEV₁ and SwCl were similar to those at 011B week 24 (Table). BMI continued to improve. LCI_{2.5} improvements were stable through EXT week 4 (n=18); values at EXT week 24 in a reduced sample size (n=12) were similar to those at 011B BL.

Conclusion LUM/IVA was well tolerated for up to 60 weeks in patients aged 6 to 11 years, with no new safety concerns compared with previous LUM/IVA studies conducted in this patient population. LUM/IVA was associated with improved BMI and maintenance of lung function.

Please refer to page A257 for declarations of interest in relation to abstract S96.

Abstract S96 Table 1

Parameter	Study 011B baseline, mean (SD) ^a	Absolute change from 011B baseline with LUM/IVA, mean (SD)			
		Study 011B wk 24 ^a	EXT wk 4	EXT wk 24	EXT wk 36
ppFEV ₁ , percentage points	91.4 (13.7) n=57	2.4 (10.2) n=53	1.5 (12.8) n=47	2.1 (11.0) n=46	1.6 (9.8) n=43
BMI, kg/m ²	16.89 (1.93) n=58	0.65 (0.69) n=56	0.71 (0.64) n=48	0.91 (0.94) n=47	1.17 (1.13) n=47
SwCl, mmol/L	105.9 (10.2) n=58	−25.6 (15.7) n=51	−26.0 (13.2) n=43	−29.0 (15.7) n=42	—
LCI _{2.5}	9.99 (2.67) n=25	−0.95 (1.39) n=23	−0.82 (1.65) n=18	−0.29 (1.36) n=12	—

^aMilla et al. *Am J Respir Crit Care Med*. 2017;195:912–920.

Improvements in lung cancer treatment

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MANAGEMENT OF EARLY STAGE LUNG CANCER IN THE ELDERLY: AN OBSERVATIONAL STUDY

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