Collateral sensitivity cycling of antibiotics for cystic fibrosis airway

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Methods: Epidemiological ambispective multicenter study. Health status was measured by EQ-5D-3L questionnaire [Descriptive part (DS) (5 dimensions) + EQ-VAS]. PEX were defined as the European Consensus Group proposal. Patients were included consecutively. Informed consent was collected and the study was approved by the EC of the Ramon y Cajal Hospital.

The communication corresponds to an interim analysis.

Results: Data from 145 patients were collected (49% from the theoretical number). 54% were female. 66 patients were included without PEX. 47 had mild PEx and 32 had severe PEx. 63, 47, and 35 patients had a mild, moderate or severe disease respectively. DS score in patients with severe PEx were worse than patients with mild PEx (p-values from 0.039 to <0.001 among different dimensions), the same was seen with 5Q-VAS score (52.58±14.25 vs 70.98±18.22; p < 0.001). DS score by state of lung disease was different between moderate and severe patients in two of five dimensions whereas 5Q-VAS score was not different (63.50±19.28 vs 56.91±21.52; p=N.S).

Conclusion: Health status in patients with more severe status (either lung disease or PEx at inclusion) is worse than in the remaining patients as expected. Patients suffering a severe PEx have health status measurements (dimensions and VAS) lower than patients with a severe lung status which seems to show the important role of PEx in patient’s quality of life.

126 Lung function response to intravenous antibiotic treatment in a paediatric CF population in East of England

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Objectives: Our purpose was to characterize the ForcExpiratory Volume in 1 second (FEV1) and forced expiratory flow rate between 25% and 75% of vital capacity (FEF25–75) response to intravenous antibiotic therapy in our CF paediatric population between January 2015 and December 2015.

Methods: Data were obtained from a retrospective and descriptive analysis of IV treatment courses given during January to December 2015. 81 samples were positive with 31 different pathogens. 30 patients under 18 years old (2–17 years) during 1 year period – from January to December 2015. 81 samples were positive with 31 different species and were tested for isolation, identification and antimicrobial susceptibility.

Results: Out of all positive samples the most common pathogens were S. aureus – 51.85%. Pseudomonas aeruginosa was isolated in 50.62% of samples. 34.15% of Pseudomonas aeruginosa was detected as mucoid form. 100% of Pseudomonas aeruginosa strains were susceptible to colistin, 76.6% to ciprofloxacin, 76% to imipenem, 56% to ceftazidim, 54% to piperacillin, 50% to tobramycin, 33.3% to amikacin. Pseudomonas aeruginosa resistance to gentamicin is 67.3%, to amikacin 51.5%, to tobramycin 50%.

Conclusion: The most common isolated pathogens were found to be S. aureus and Pseudomonas aeruginosa. High resistance to medications used in first line Pseudomonas aeruginosa infection treatment suggest the need to adapt our treatment regimens to more suitable ones.

129 Susceptibility of Staphylococcus aureus isolates from patients with and without cystic fibrosis to cefotibiprole

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Introduction: Cefotibiprole is a broad spectrum “5th generation” cephalosporin antibiotic, which has demonstrated activity against Gram-positive cocci, including Metcillin sensitive and resistant Staphylococcus aureus (MSSA and MRSA). This study aimed to compare the susceptibility of a range of MSSA and MRSA isolates from both CF and non-CF patients, to cefotibiprole and comparator antibiotics.

Methods: The susceptibility of MSSA (CF: n=25; non-CF: n=24) and MRSA (CF: n=24; non-CF: n=29) isolates to cefotibiprole, linezolid, rifampicin and vancomycin was determined using E-test® strips with minimum inhibitory concentrations read after 24h of incubation at 37°C. Where possible, isolates with a diverse genetic background were selected for inclusion in this study. Isolates were classified as either susceptible, intermediate or resistant to each antibiotic in accordance with Clinical and Laboratory Standards Institute breakpoints.

Results: No MSSA isolates tested were resistant to any of the antibiotics tested. Of the MRSA isolates tested, 3/53 (5.6%), all from CF patients, were resistant or intermediately resistant to rifampicin.