Background Amikacin liposome inhalation suspension (ALIS) is the first FDA-approved treatment included in a combination antibacterial drug regimen for adults with refractory Mycobacterium avium complex lung disease (MAC-LD) who have limited or no alternative treatment options. This study used qualitative research methods via one-on-one interviews to gain insight into real-world patient perspectives and practices to mitigate adverse effects (AEs) associated with ALIS.

Methods Adults in the United States were recruited through the patient support program. Patients who received ALIS for ≥7 consecutive days and self-reported a clinician-confirmed...
diagnosis of refractory MAC-LD were included. A sample size of 20 patients was targeted. Purposive sampling was used to ensure representation of patients with different ALIS therapy durations. Team members trained in qualitative data collection techniques used a semi-structured interview guide with open-ended questions and follow-up probes to conduct patient interviews via phone. Transcripts were coded and analysed using ATLAS.ti v8.

Results Invitations were sent to 839 patients; 95 patients completed the screening survey and 41 were eligible. Interviews were conducted with 20 patients (mean age, 48.7 years; 90% white; 80% women; mean ALIS duration, 5.45 months). At the time of interview, 15 patients (75%) had experience receiving ALIS for longer than 1 month, and 13 patients (65%) were currently receiving ALIS treatment.

Patients described 44 unique AE mitigation strategies, which can be described using 3 categories (figure 1). Most strategies were used to mitigate respiratory AEs. Common strategies (≥50%) included use of relevant informational materials, localized management of throat irritation, and symptom management to reduce fatigue. Concept saturation was achieved, as no new strategies were identified in the last 5 interviews.

Summary Mitigation strategies intended to prepare patients for ALIS treatment, prevent the increased emergence of certain AEs, and mitigate impact of AEs on treatment persistence may have clinical relevance for treatment of MAC-LD with ALIS. Real-world data identified the diverse set of AE mitigation strategies used by patients and also opportunities clinicians can avail of and adopt in improving adherence to ALIS treatment. These qualitative data can inform future studies to further quantify the effectiveness of AE mitigation strategies in real-world settings.

Please refer to page A289 for declarations of interest related to this abstract.

'Take my breath away’ – Novel diagnostics in respiratory disease

A COMPARISON OF TWO INHALATION METHODS DURING A EUCAPNIC VOLUNTARY HYPERPNOEA CHALLENGE

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Introduction The Eucapnic Voluntary Hyperpnoea (EVH) challenge is a surrogate for exercise to diagnose exercise-induced bronchoconstriction (EIB). High minute ventilation (Vₐ) of dry gas is achieved using either a mouth piece or face mask. To date, no comparison has been made between these two different inhalation methods during an EVH challenge.

Objective To investigate the difference in maximal fall in forced expiratory volume in one second from baseline (ΔFEV₁) post EVH challenge when using a mouth piece or face mask.

Method Following ethical approval (REF No. 152022), 15 recreationally active males (28.9±11.2 years, 176.7±9.2cm and 82.1±11.2 kg) and 10 females (30.1±10.4 years, 163.9±5.6cm and 61.7±7.0 kg) were recruited. Participants prescribed asthma/EIB medication (n=8) withheld from Salbutamol on the morning of the testing. Participants completed two EVH challenges separated by a week, using either a one-way valve mouth piece or face mask. Participants inhaled a gas mixture of 21% oxygen, 5% carbon dioxide, balance nitrogen for 6 minutes at a target Vₐ (30 x baseline FEV₁). Spirometry was performed in triplicate at baseline and in duplicate at 3, 5, 7, 10 and 15 minutes post EVH. A ≥10% reduction in FEV₁ at two consecutive time points was defined as EVH positive. An independent samples and paired samples t-test were used for group comparisons. Significance was set at p<0.05.

Results All participants baseline FEV₁ >80% predicted. A total of 16 participants were EVH negative and 9 were EVH positive. In the EVH negative group there was no significant difference in ΔFEV₁ between conditions (p = 0.41). The EVH positive group had a greater ΔFEV₁ when using the mouth piece compared to the face mask (-15.44 ± 6.33% vs -10.67 ± 6.89%, respectively, p = 0.02). There was no significant difference in Vₐ achieved between conditions for the EVH positive group (p = 0.95).

Conclusion Using a one-way valve mouth piece during an EVH challenge leads to a greater ΔFEV₁ compared to using a face mask in participants with a positive challenge. Therefore, caution should be made if an individual presents with a ΔFEV₁ of <10% when using an EVH challenge with a face mask.

THE UTILITY OF NASAL NITRIC OXIDE MEASUREMENTS IN PATIENTS WITH RHINITIS IN A COMPLEX BREATHLESSNESS CLINIC

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Background Patients are referred to our complex breathlessness service with clinical suspicion of inducible laryngeal obstruction (ILO), breathing pattern disorder (BPD) or chronic cough (CC), often with comorbidities including asthma or uncontrolled nasal disease that impacts on patients’ symptoms.

 Aim To assess the impact of introducing nasal nitric oxide (nNO) in the assessment of nasal treatment outcomes in complex breathlessness patients.

Methods Demographic data, co-morbidities and clinical outcomes were collected from patients attending the Manchester Airways service (2022–2023). Patients were screened for uncontrolled rhinitis via detailed case history and laryngoscopy. Total nasal symptom score (TNSS) and nNO (right and left nostril) were recorded pre and post therapy. The asthma control questionnaire (ACQ5) and fractional exhaled nitric oxide (FeNO) were recorded in known asthmatic patients. A visual analogue score (VAS) was recorded in CC patients.

Demographic data, co-morbidities and nNO were also collected from 20 staff members.

Results Of 26 patients [17 female, mean (SD) age 50 (15) yrs] with suspected nasal disease, 21 had asthma, 6 CC, 10 BPD, 6 ILO. All were treated with nasal steroids, and 14 (55%) nasal douching. Left and right nostril nNO showed good reproducibility (intraclass correlation coefficient 0.86).

Pre-treatment median (IQR) nNO 333ppb (108–419), TNSS 5.56 (4–7), ACQ5 3.1 (2.1–3.9), FeNO 33ppb (12–43)