

nebulised hypertonic saline (HTS): 6/12 reduced clinical effect, 4/12 bronchoconstriction, 1/12 dislike and 1/12 reason unknown.

4/12 (33%) were taking IM intermittently. Reasons for intermittent use included: use during exacerbation only (n = 2); adherence issues (n = 1) and alternating with HTS (n = 1). 7/12 (58%) of patients were taking IM as prescribed (400 mg twice daily) with 1/12 (8%) taking 400 mg once daily. The remaining 4 patients (33%) reported reducing the dose to balance bronchoconstriction with clinical effectiveness (range 5–10 capsules b.d. when stable, 0–7 capsules b.d. during exacerbations). There was no clear link between dose adjustment and baseline lung function. 2/12 (17%) patients reported an episode of moderate volume haemoptysis while on treatment with IM.

Conclusion: IM was tolerated across a wide range of CF disease severity in this cohort. Adjustment of IM dose and frequency of treatment by adults with CF was common. Further research with larger studies is required to assess the efficacy of IM at non-standard doses.

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The effect of Simeox airway clearance technology on resting hyperinflation in cystic fibrosis patients

M. Proffit¹, M. Magni¹, G. Desbois², L. Morin³. ¹La Bulle Kine, Respiratory and Pediatric Rehabilitation Center, Nice, France; ²Kiné Respi Assistance, Respiratory Physiotherapy Center, Lyon, France; ³Physio-Assist, Medical Affairs, Aix-en-Provence, France

Objectives: Bronchial drainage is a key component of prophylactic chest physiotherapy performed in patients with cystic fibrosis (CF), to reduce recurrent pulmonary exacerbations and lung function decline. Evaluation of new airway clearance techniques (ACTs) is required to understand the physiological effects of these technologies on respiratory function.

Aim of this study was to assess the effects of new Simeox technology on resting lung hyperinflation in CF patients with stable respiratory function.

Methods: Adult CF patients receiving prophylactic chest physiotherapy with Simeox device (Physio-Assist, France) assisted by respiratory physiotherapists were included consecutively in 2 centers. Patients performed under physiotherapist supervision 3 valid measurements of resting inspiratory capacity (IC) with a computerized stand-alone spirometer (Spirolab, MIR) before and 15–30 min after one single 20-min drainage session with Simeox. Mean of 3 IC values was calculated for pre and post evaluation in each patient.

Results: 21 CF patients were included in the study: 10 males (26.7 ± 6.3 y) and 11 females (26.9 ± 8.1 y). Variability of IC measurements was correct for both pre and post evaluation (mean coefficient of variation <5%). 10 patients had baseline IC% pred. <80% (60 ± 15%). Change in mean IC was increased significantly by 110 ± 140 ml and 4 ± 5% pred. (p < 0.005). 11 patients had an increase of IC% pred ≥ 5% (220 ± 90 ml; 9 ± 4%). Evolution of IC was similar according to gender, centre or baseline IC.

Conclusions: Inspiratory capacity at rest was improved in CF patients after one single drainage session with Simeox technology suggesting a direct effect on lung hyperinflation reduction. This physiological mechanism may have significant impact on the evolution of lung function in CF and should be confirmed with long-term data.

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Patient reported use, effects and tolerance of 0.9% saline nasal irrigation (SNI) in a large UK adult cystic fibrosis centre

S. Cameron¹, C. Brown¹, N. Rodgers¹, A. Purba¹, R. MacDonald-Johns¹, K. Jozłowski¹, V. Carrolan¹, J. Pond¹, N. Patel¹, J. Whitehouse¹, R. Rashid¹, E.F. Nash¹. ¹West Midlands Regional Adult Cystic Fibrosis Centre, Birmingham, United Kingdom

Background: SNI is often recommended as an adjunct to the medical management of rhinosinusitis and is used by CF adults attending our centre. However, there is currently minimal evidence relating to the use and effects of SNI in the CF population.

Objectives: To determine in our population reasons for commencing 0.9% SNI, effects, tolerance and frequency of use.

Methods: Patients attending the centre between January–December 2019, currently using SNI or who had used it consistently in the recent past, completed a bespoke questionnaire.

Results: 28 CF adults, median age 36 and best FEV₁% predicted in the past 12 months 63%, completed questionnaires. Reasons for commencing SNI were: rhinosinusitis symptoms 16/28 (57%); nasal/sinus surgery 4/28 (14%); nasal dryness/soreness related to and not related to LTOT/NIV use 3/28 (11%) and 1/28 (4%) respectively; other 4/28 (14%). 25/28 (89%) reported symptomatic benefits from SNI. Symptoms best relieved in order were blocked nose, nasal discharge and facial pain/pressure, reduced/loss of smell, headache and sneezing, itchy nose. Other benefits reported were increased exercise tolerance 4/25 (16%), increased SpO₂ 1/25 (4%), improved tolerance of LTOT/NIV 2/25 (8%). Of the 3/28 who reported no benefits, one was using SNI as 'cold' prophylaxis, one for an acute infection and one for hayfever symptoms. 5/28 (18%) patients each reported one adverse effect; saline in ear canal; increased pain/pressure in sinuses; nasal stinging if very congested; increased nasal drip, feeling drowsy. 9/28 (32%) used SNI only during an acute infection. Of the 19/28 who used it throughout the year, 8/19 (42%) used it once daily or more, 6/19 (32%) several times a week, 1/19 (5%) once a week, 4/19 (21%) several times a month or less.

Conclusion: The majority of the patients studied reported symptomatic benefits from 0.9% SNI and it was generally well tolerated. Further investigation with greater numbers of patients is warranted.

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Experiences of the Nuvoair home spirometry, a pilot study

L. Lannefors^{1,2}, S. Höglund², P. Ericson^{2,3}, M. Gilljam^{2,3}. ¹Göteborg University, Dept of Physical Therapy, Gothenburg, Sweden; ²Gothenburg CF Centre, Sahlgrenska University Hospital, Gothenburg, Sweden; ³Göteborg University, Respiratory Medicine, Gothenburg, Sweden

Objectives: A pilot study to assess the potential use of Nuvoair home spirometer as a complement to spirometry in clinic or an alternative to currently used home spirometer after lung transplantation.

Methods: Selected patients were invited to participate. Patients were instructed to do spirometry once daily the first week, then three times/week for six weeks, then individual instructions were given. A brief questionnaire was completed after the trial.

Results: Twelve patients (3 males, 4 lung transplanted) with a mean age of 32 (SD 8) years and a mean FEV₁ of 52 (SD 25) percent predicted were included. Except for some initial technical problems all patients found the spirometer and the App easy to use, a good tool for CF and better than currently used home spirometer after transplantation. They also appreciated the possibility with Nuvoair to upload results to a homepage accessible to the CF staff. All patients wanted to keep the spirometer after the test period with the intention of routine use. The CF staff appreciated easy access to home spirometry data, the possibility to postpone selected clinical visits and the use of Nuvoair as a pedagogic tool.

Conclusion: The Nuvoair homespirometer is a good complement in CF care. The use of the tool has to be individualised.

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Introduction of nebulised levofloxacin in an adult cystic fibrosis centre

C. Fordyce¹, H. Langman¹, H. Green¹, A. Jones¹. ¹Manchester University NHS Foundation Trust, Manchester Adult Cystic Fibrosis Centre, Manchester, United Kingdom

Objectives: Levofloxacin nebuliser solution (Quinsair[®]) was licenced for use in England in 2018 as a 4th line antipseudomonal nebulised therapy in the treatment of cystic fibrosis. At Manchester Adult Cystic Fibrosis Centre (MACFC), Quinsair[®] was first used in our patient cohort in January 2019. We aimed to evaluate the introduction of Quinsair[®] in a large adult cystic fibrosis centre.

Methods: All patients identified for trial of Quinsair[®] had a test dose completed by a trained physiotherapist in line with MACFC challenge protocol. An inhaled or nebulised bronchodilator was administered pre-therapy in accordance with the Clinical Commissioning Policy. A 28-day course was commenced if successful at test dose. Spirometry was completed after 28 days to assess response to therapy.

Results: 9 patients received a test dose of Quinsair[®] between January 1st 2019 and December 31st 2019 (male n = 6, Female n = 3), with mean FEV₁ at time of challenge of 32.8% (range 20%–81%). 3/9 failed at challenge, 1 due to