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Workshop 14 – Innovative nursing and psychosocial treatment delivery developed during COVID-19 restrictions

WS14.1

The effect of the COVID-19 pandemic on quality of life of adults with cystic fibrosis

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Objectives: The effect of the COVID-19 pandemic on the quality of life (QOL) of people with cystic fibrosis (pwcf) remains unclear. This study investigated the change in QOL, measured by the CFQ-R, in adult pwcf prior to and during the COVID-19 pandemic.

Methods: The CFQ-R scores of 88 adult pwcf completed at two routine clinic appointments (one prior to first COVID-19 case in Wales 28/2/20 and one post) were retrospectively reviewed. Any change in CFTR modulator therapy between these dates was recorded along with demographics, FEV₁% and BMI.

Results: 88 (52 male, 36 female) with mean age, FEV₁% and BMI of 32.2 years, 61.6% and 22.7 kg/m² respectively had two consecutive CFQ-R results in the above time frame. Overall, mean social domain scores significantly declined (60.4 to 54.2 $p < 0.001$) and mean emotion scores fell from 69.3 to 65.9 ($p = 0.07$). Results did not vary between males and females.

59/88 had a change in modulator status during this period, mainly commencing Symkevi[®] or triple modulator therapy, and this group experienced a significant increase in FEV₁% ($p < 0.01$) and BMI ($p = 0.02$) and a statistically significant improvement in every domain of the CFQ-R except emotion, eating, digestion and social. Their mean social score dropped significantly 59.5 to 54.2 ($p = 0.018$).

Of the 29 pwcf with no change in modulator status, there was no significant change in FEV₁% or BMI. Mean emotion domain scores, which assesses feelings of being sad, useless, lonely and difficulty making future plans, significantly worsened from 78.1 to 70.6 ($p = 0.018$). Mean social scores decreased from 62.1 to 54.2 ($p = 0.037$).

Conclusion: This is the first study looking at QOL during COVID-19 in pwcf. During the COVID-19 pandemic there have been developments in access to highly effective modulators, but despite improvements in FEV₁%, BMI and many CFQ-R domains suggesting improved health, emotion and social domain scores fell. This is likely to reflect the effect of the COVID-19 pandemic.

WS14.2

Potential factors influencing reduced requirements for intravenous antibiotics during the COVID-19 pandemic

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Objective: The use of intravenous antibiotics (IVAB) is a central part of the management of pulmonary infections in cystic fibrosis (CF). Adult patients with CF in England were advised to “shield” by the government (23.03.2020–01.08.2020) during the COVID-19 pandemic. Shielding was described as the requirement to not leave home and minimise all face-to-face contact. At our adult CF centre in London, there was a 50% reduction in requirement for IVAB, compared to the same period in 2019.

We aimed to identify potential factors contributing to the reduced requirement of IVAB during shielding.

Method: An 8-point patient questionnaire was given to 27 patients who had required ≥ 3 courses of IVAB in the year 2019. These were designed to identify: percentage of patients shielding, percentage of patients starting a modulator, variation in adherence to regular medications, chest physiotherapy, and requirement to IVAB.

Results: 70% response rate ($n = 19$).

FULLY SHIELDED	89%
PARTIAL SHIELDED	11%
DID NOT SHIELD	0%
REQUIRED ADDITIONAL ANTIBIOTICS	74%
REQUIREMENT FOR IVAB REDUCED	26%
REQUIREMENT FOR IVAB STAYED THE SAME	68%
REQUIREMENT FOR IVAB INCREASED	5%
DURING SHIELDING HEALTH STATUS REDUCED	21%
DURING SHIELDING HEALTH STATUS STAYED THE SAME	37%
DURING SHIELDING HEALTH STATUS INCREASED	42%
DURING SHIELDING ADHERENCE TO REGULAR MEDICATIONS STAYED THE SAME	79%
DURING SHIELDING ADHERENCE TO REGULAR MEDICATIONS INCREASED	21%
DURING SHIELDING ADHERENCE TO REGULAR CHEST PHYSIOTHERAPY REDUCED	11%
DURING SHIELDING ADHERENCE TO REGULAR CHEST PHYSIOTHERAPY STAYED THE SAME	68%
DURING SHIELDING ADHERENCE TO REGULAR CHEST PHYSIOTHERAPY INCREASED	21%
DURING SHIELDING PATIENT FELT THEY COULD ACCESS CF TEAM IF REQUIRED	95%
STARTED MODULATOR THERAPY IN THE PRECEDING 12 MONTHS	84%

Despite a 50% reduction in IVAB compared to the previous year, the majority of patients reported their requirement for IVAB remained the same (68%).

There was no self-reported increase in adherence to regular medications or chest physiotherapy. The majority of patients felt their overall health status remained stable or improved (78%). During this period the majority of patients fully shielded (84%) and started Symkevi[®]/Kalydeco or Kaftrio[®]/Kalydeco (as part of a trial or compassionate use program) (84%).

Conclusion: Increased adherence to regular medication and physiotherapy did not appear to be a factor in reducing the requirement for IVAB observed during the UK COVID-19 pandemic lockdown. Adherence to government shielding may have reduced exposure to community acquired infections and associated requirement for IVAB. Commencement of a modulator therapy was likely to have a positive impact on overall health and associated reduction in requirement of IVAB.

WS14.3

Virtual consultation in cystic fibrosis: an Italian experience

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Objectives: Telehealth is growing rapidly and has the potential to transform the delivery of healthcare for patients with respiratory diseases. The aim of this prospective observational study was to determine acceptability of, and patient satisfaction with, the NuvoAir Home platform in patients with cystic fibrosis (CF) who had been enrolled in a virtual consultation (VC) service for more than six months.

Methods: The NuvoAir Home platform consists of a smartphone application, Bluetooth spirometer and a clinician portal. Patients were trained to use the NuvoAir Home platform in hospital by a member of the CF team and asked to do home spirometry, at least, once per month. After each VC, a survey was emailed to patients to evaluate their experience when using the technology.

Results: 42 consecutive CF patients managed at the adult CF centre, Federico II Hospital, Naples, Italy (18 males, 24 females, mean age 31.5 \pm 6.8 SD yrs; 15 homozygous for F508del; FEV₁ 52.3 \pm 16.3 SD % predicted, BMI 22.3 \pm 2.8 SD) were studied. A total of 22 (52.0%) survey responses over six months were received from patient consultations. All patients reported the NuvoAir Home platform easy to use and a good tool