|  |
| --- |
| **Observational prospective study of SARS-CoV-2 infection outcomes in adults with cystic fibrosis attending a large centre in Australia.** |
| Cameron S*1*, Lacey A*1*, Pelecanos A*3*, Henderson D*1*, Smith DJ*1,2*, Masel P1.2, Hartel G*3*, McMahon T*1*, Moore V*1*, Reid DW1,2,*3*. |
| *1 Adult CF Centre,The Prince Charles Hospital, Brisbane.*  *2 School of Medicine, University of Queensland, Brisbane*  *3 Lung inflammation and infection laboratory, QIMR Berghofer Medical Research Institute, Brisbane* |
| **Introduction/Aim:**  Despite chronic lung diseases being a risk factor for severe SARS-CoV-2 infection, reports to date on people with cystic fibrosis (pwCF) do not suggest worse outcomes compared to the general population. We report our experience of outcomes of SARS-CoV-2 infection in pwCF attending a major adult cystic fibrosis (CF) centre in Brisbane, Queensland, Australia in the setting of strict national lockdowns and closed inter-state borders, which “bought time” for vaccination of most of the CF community in Queensland.  **Methods:** A prospective observational study of the first 96 pwCF infected with SARS-CoV-2 in Queensland, Australia who attended the Prince Charles Hospital CF centre (n=328 adults). Incidence of infection was followed from 6th February 2020 when the first case of SARS-CoV-2 was identified in Queensland until 17/3/2023.  **Results:** There were no deaths in pwCF. We documented a total of 96 pwCF with confirmed SARS-CoV-2 between 13/12/2021 and 17/3/2023. 90% of patients were vaccinated with at least one dose of Covid 19 vaccine prior to infection. 19% of patients required hospital admission to treat a pulmonary exacerbation of cystic fibrosis secondary to SARS-CoV-2 infection. Only 6% received a covid 19 specific anti-viral or monoclonal antibody in their treatment, 45% received inhaled corticosteroids (ICS) and 1% received oral steroids.  There was evidence of a statistically significant association (p=0.050) between ICS treatment and improvement in lung function pre to post SARS-CoV-2 infection, where patient’s lung function change from pre to post was 0.137 L (95% CI 0 – 0.274) higher compared to those who did not receive ICS therapy. However, this effect was dependent upon their pre infection lung function, with those with higher FEV1 prior to infection demonstrating benefit over those with lower FEV1.  **Conclusion:** pWCF demonstrated mild symptoms only when infected with SARS-CoV-2 permitting outpatient treatment. There was evidence that treatment with inhaled corticosteroids was beneficial for patients pWCF infected with SARS-CoV2.  **Grant Support: Nil**. |