A proposed approach to pulmonary long COVID: a viewpoint

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Shareable abstract (@ERSpublications)
A majority of patients with pulmonary long COVID have small airway disease, characterised by inflammation, which can be diagnosed with traditional and emerging technologies https://bit.ly/48WceB3

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Long COVID (also known as "post-acute sequelae of COVID-19") is a multi-system disorder that follows an acute bout of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection [1]. Although its exact prevalence is unknown, it is estimated to affect approximately 10% of SARS-CoV-2-infected individuals, though in reality the proportion is likely much higher owing to under-reporting of cases [1]. The prevalence is elevated in patients who have had acute SARS-CoV-2 pneumonia requiring hospitalisation, and lower in those who have been previously vaccinated or were infected with the Omicron variant [1]. In approximately 6% of the cases of long COVID, pulmonary symptoms such as dyspnoea, cough and wheeziness are prominent, leading to considerable disability and morbidity [2, 3]. While it is attractive to view long COVID as one disease, it is likely a very complex, heterogeneous disorder, with multiple different phenotypes, each driven by a unique set of molecules and pathways [1]. Even within an organ system (*e.g.* the lungs), there is likely to be significant heterogeneity in the phenotypes of disease. Here, we hypothesise that patients with long COVID with a predominance of pulmonary symptoms (which we will refer to in this viewpoint editorial as "pulmonary long COVID", or PLC) have airway pathology that can be detected using conventional as well as emerging technologies, and careful phenotyping of this condition will provide important insights on its mechanism(s) and reveal novel biomarkers and therapeutic solutions for millions around the world with PLC.