European Cystic Fibrosis Society

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Cystic Fibrosis Research News

Title:

Clinical characteristics of SARS-CoV-2 infection in children with cystic fibrosis: An international observational study

Lay Title:

Experience of COVID-19 during the first wave in children with cystic fibrosis worldwide.

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What was your research question?

We wished to collect information from registries around the world about children with cystic fibrosis who contracted COVID-19 during the first wave of the pandemic (between February and August 2020).

Why is this important?

This information was (and still is) very important to enable accurate advice to be given to children with cystic fibrosis, their families and the clinical teams that look after them. At the start of the COVID-19 pandemic there was uncertainty about the possible impact of contracting COVID-19 on children with cystic fibrosis and therefore it was very hard to balance advice about strict isolation/shielding measures against the effect that these have on children's day-to-day life.

What did you do?

This was a collaborative effort, involving data from 13 countries, by the CF Registry Global Harmonization Group. The information on children was collated by UK researchers from Newcastle University (Robbie Bain, Malcolm Brodlie and Iram Haq) and the Cystic Fibrosis Trust (Rebecca Cosgriff and Keith Brownlee). All available information on children with CF who had COVID-19 between February and August 2020 was collected and analysed. This was then summarised and published in a paper in the *Journal of Cystic Fibrosis* that is free for anyone who is interested to download and read.

What did you find?

Information on 105 children was collected. The average age was 10 years with a range from babies aged less than one through to some 17 year olds. As we would expect in children this age the average lung function was good. The majority (71%) were managed in the community and experienced a mild illness. Around a fifth of children were admitted to hospital and of

these a quarter required some extra oxygen and 2 children temporarily required some help with their breathing via a mask. Those admitted to hospital had lower lung function before getting COVID-19 and lower body mass index.

What does this mean and reasons for caution?

This was the first information available worldwide on the experience of a large number of children with cystic fibrosis who have contracted COVID-19. Overall it was reassuring that the majority had just mild symptoms and recovered well. The level of detail that we had about each case varied between countries and most cases were in children with good lung function. This study also only covered the first wave of COVID-19 up to August 2020. It remains extremely important that any specific advice given by a child's own clinical team and/or national public health organisations is followed carefully.

What's next?

In some countries older children are now being vaccinated against COVID-19. It may also be possible to see how children have got on in the longer-term after having had COVID-19 over the next few years by looking at information in registries over the next few years. There have also been similar registry studies done in adults with cystic fibrosis.

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