

Cystic Fibrosis Research News

Title:

Diabetes is Associated with Increased Burden of Gastrointestinal Symptoms in Adults with Cystic Fibrosis

Lay Title:

Diabetes is associated with an increased burden of tummy and bowel symptoms in adults with cystic fibrosis

Authors:

L.R. Caley^a, C. Zagoya^b, F. Duckstein^b, H. White^c, D. Shimmin^d, A.M. Jones^e, J. Barrett^f, J.L. Whitehouse^f, R.A. Floto^{g,h}, J.G. Mainz^{b,i,1}, D.G. Peckham^{a,d,1}

Affiliations:

a Leeds Institute of Medical Research at St James' s University Hospital, University of Leeds, Leeds, United Kingdom

b Brandenburg Medical School, University Hospital. Klinikum Westbrandenburg, Brandenburg an der Havel, Germany

c Nutrition, Health & Environment, Leeds Beckett University, Leeds, United Kingdom

d Department of Respiratory Medicine, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom

e Manchester Adult Cystic Fibrosis Centre, Wythenshawe Hospital, Manchester University Hospitals NHS Foundation Trust, United Kingdom

f West Midlands Adult CF Centre, University Hospitals Birmingham NHS, Foundation Trust, Birmingham, United Kingdom

g MRC -Laboratory of Molecular Biology, Molecular Immunity Unit, University of Cambridge Department of Medicine, Cambridge, United Kingdom

h Cambridge Centre for Lung Infection, Papworth Hospital, Cambridge, United Kingdom

i Faculty of Health Sciences Faculty of the Brandenburg University of Technology Cottbus - Senftenberg, the Brandenburg Medical School Theodor Fontane and the University of Potsdam, Germany

1. these authors share last authorship

What was your research question?

Does cystic fibrosis related diabetes increase tummy and bowel symptoms in adults with CF?

Cystic Fibrosis Research News

Why is this important?

Diabetes in people without cystic fibrosis (CF) is associated with an increase in tummy and bowel symptoms. Similarly, tummy and bowel symptoms are very common and burdensome for people with CF (pwCF). We therefore set out to find out if diabetes accentuated symptoms in people with CF and whether the types of symptoms were similar to those reported in non-CF diabetes.

What did you do?

This study was part of a large observational cohort study in pancreatic insufficient adults with CF (the Igloo-CF study). We measured tummy and bowel symptoms using a validated questionnaire for pwCF, called the CFAbd-Score[®]. For this study, we compared tummy and bowel symptom scores and nine specific symptoms, which are particularly common in non-CF diabetes, between individuals with CF with and without CF-related diabetes (CFRD). None of the participants included in this analysis were taking CFTR modulator drugs.

What did you find?

The 27 participants with CFRD had a higher total CFAbd-Score, indicating an overall higher burden of tummy and bowel symptoms, than the 61 participants without CFRD. When focusing on nine specific symptoms which are known to be elevated in people with non-CF diabetes, we found those with CFRD had significantly more bloating and nausea than those without CFRD.

What does this mean and reasons for caution?

It appears that CFRD may be linked with an even higher prevalence of tummy and bowel symptoms in pwCF. We need to be careful when interpreting our results because our study design cannot prove that CFRD is causing these symptoms and there may be other factors affecting these results.

What's next?

Further research is essential to confirm our findings because people with CFRD may need further support to better manage their tummy and bowel symptoms. We also need to identify the potential causes of these findings and the impact of new CFTR modulators on them.

Original manuscript citation in PubMed

<https://pubmed.ncbi.nlm.nih.gov/36710099/>