

Cystic Fibrosis Research News

Title:

Glucose abnormalities detected by continuous glucose monitoring are common in young children with Cystic Fibrosis

Authors:

Bernadette J. Prentice^{abc}, Chee Y. Ooi^{bcd}, Charles F. Verge^{bce}, Shihab Hameed^{bcef}, John Widger^{abc}

Affiliations:

^aDepartment of Respiratory Medicine, Sydney Children's Hospital, Randwick, NSW, Australia

^bSchool of Women's and Children's Health, Medicine, The University of New South Wales, Randwick, NSW, Australia

^cMolecular and Integrative Cystic Fibrosis Research Centre (miCF_RC), Sydney, Australia

^dDepartment of Gastroenterology, Sydney Children's Hospital, Randwick, NSW, Australia

^eDepartment of Endocrinology, Sydney Children's Hospital, Randwick, NSW, Australia

^fFaculty of Medicine, University of Sydney, NSW, Australia

What was your research question?

Our research questions was whether or not children with Cystic Fibrosis had persistent glucose abnormalities when repeat Continuous Glucose monitoring (CGM) studies were done over time.

Why is this important?

People with Cystic Fibrosis who also develop Cystic Fibrosis-related diabetes (CFRD) have more lung infections and poorer lung function, and in some cases will die younger compared to people who do not develop CFRD. The rates of CFRD increase with age however it is not yet known how glucose abnormalities evolve over time in early childhood and at what age they begin.

What did you do?

We performed repeat CGM studies in a group of children with Cystic Fibrosis over two years. All children were assessed on three separate occasions and we looked at several outcomes, including how variable their CGM study glucose levels were, how high their glucose levels reached and how long they each spent in the "abnormal range".



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What did you find?

The most important result of the study was that glucose abnormalities detected by CGM were common in this group of children with Cystic Fibrosis. Most children had abnormal glucose levels on at least one CGM assessment. The other finding of note was that often the abnormal assessment did not remain abnormal as there was so much variability.

What does this mean and reasons for caution?

This small study did not have any clinical correlation so we are not yet sure if these CGM abnormalities vary with infections or lung damage on CT nor whether they predict who will get CFRD in the future.

What's next?

Further larger longer-term follow-up studies are important to determine whether these early glucose abnormalities are clinically important. It is also important to work out whether new CFTR modulators will treat glucose abnormalities to prevent any potential ongoing issues with lung infections in the future especially if high glucose levels still occur in early childhood and persist over time.

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