

Cystic Fibrosis Research News

Title:

Monitoring ETI effects over 1.7 years in an infant treated in utero, via breast milk and granules by repeated faecal elastase measurements

Lay Title:

Tracking the effects of ETI treatment on pancreas in an infant over 1.7 years using stool tests

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What was your research question?

Can continuous exposure to Elexacaftor/Tezacaftor/Ivacaftor (ETI) before and after birth help preserve pancreatic function in children with cystic fibrosis (CF)?

Why is this important?

Pancreatic insufficiency is a common and serious issue in CF, often managed with pancreatic enzyme replacement therapy (PERT). Despite new CF treatments like ETI, patients still require enzyme therapy. Understanding whether ETI exposure from before birth can preserve pancreatic function might reduce the need for PERT, improving quality of life for people with CF.

What did you do?

We tracked the pancreatic function of a 1.7-year-old boy with CF who was exposed to ETI both in utero and through breast milk after birth. His pancreatic function was monitored using elastase testing in stool. We assessed the effects of continuous ETI exposure on his pancreatic health.

What did you find?

The infant's pancreatic function was initially normal at birth. Over time, despite fluctuations, he maintained sufficient pancreatic function while continuing breastfeeding, which provided



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ETI. At 8 months, he required PERT due to worsening pancreatic function. After starting crushed ETI tablets, his faecal elastase levels increased, leading to the discontinuation of PERT at 12 months.

What does this mean and reasons for caution?

This case suggests that exposure to ETI before and after birth might help preserve pancreatic function in CF. However, this is a single case, and results may not be generalizable. Further studies are needed to understand the long-term impact and safety of ETI exposure on pancreatic health in young children with CF.

What's next?

Further research is needed to confirm these findings in a larger group of patients and explore the long-term effects of ETI exposure on pancreatic function in CF.

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<https://pubmed.ncbi.nlm.nih.gov/39880765/>