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Cystic Fibrosis Research News

Title:

Impact of elexacaftor/tezacaftor/ivacaftor on utilization of routine therapies in cystic fibrosis: Danish nationwide register study

Lay Title:

Effect of elexacaftor/tezacaftor/ivacaftor on the use of routine therapies in Danish people with cystic fibrosis

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What was your research question?

Did starting elexacaftor/tezacaftor/ivacaftor lead to changes in the use of routine treatments in Danish people with cystic fibrosis (CF)?

Why is this important?

We know from previous research that ETI improves symptoms and lung function in people with CF. Less is known about how ETI has changed the use of routine treatments. Knowing how ETI has changed treatment patterns is important to monitor the effects of ETI in the real

world, help health care providers in planning future CF-care, and generate new research questions.

What did you do?

We looked at how many people filled prescriptions for routine treatments in the two years before starting ETI, and the two years after starting ETI. We defined someone filling a prescription as someone using a medicine. We looked at treatment groups, such as airway treatments, gastrointestinal treatments, inhaled antibiotics, oral antibiotics, and endocrine treatments. We also looked at some specific medicines, such as dornase alfa, pancreas enzyme supplements, and penicillin, among others. We looked at the probability of filling a prescription, controlling for other factors that may have an effect, including the season and covid-19 lockdowns.

What did you find?

Our study population consisted of 361 people starting ETI. After starting ETI, fewer people filled prescriptions for airway medications, oral antibiotics, and inhaled antibiotics: the year before ETI, 89.5% of people used an airway medication, compared to 75.1% in the second year after starting ETI. For inhaled antibiotics, the numbers were 59.5% before ETI, and 42.9% after ETI. We also found a lower probability of filling a prescription for airway medications, inhaled antibiotics, oral antibiotics, and gastrointestinal medications when controlling for season and covid-19.

What does this mean and reasons for caution?

Our findings suggest that shortly after ETI, people make lasting changes to their treatment regimes, reducing the use of several routine therapies. The treatment guidelines for CF haven't changed in the period we have looked at, and we therefore believe that the changes were initiated by people with CF themselves. This study shows that ETI is effective in reducing the need for some treatments, but it is still unknown how reducing these treatments will affect lung function over time. A limitation of this research is that we do not know if people take the medicines collected at the pharmacy.

What's next?

We need to learn more about how people with CF are managing their routine treatments after starting ETI, and the perspectives of people choosing to reduce or discontinue their treatments. We also need more research on whether lung function changes after reducing maintenance therapies while taking ETI.

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