



Cystic Fibrosis Research News

Title:

Elexacafator/tezacaftor/ivacaftor Resolves Subfertility in Females with CF: A Two Center Case Series

Lay Title:

Triple Therapy May Resolve Fertility Issues in Women with CF: a report from 2 CF Centers

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What was your research question?

In the past, increased fertility and higher rates of unexpected pregnancies had been noted with the use of ivacaftor and lumacaftor/ivacaftor. Similar findings are expected with the increased prescribing of ETI but there are limited data to support this. We sought to observe the trends in fertility with our female patients on ETI.

Why is this important?

FwCF (Females with cystic fibrosis) often suffer from fertility problems more often the general public fostering a belief that FwCF are unlikely to conceive. This view can lead to irregular contraceptive use and delayed family planning practices. ETI may improve many of the causes for increased infertility and subfertility (defined as achieving conception after greater than 1 year of unprotected intercourse or utilization of reproductive technologies after a preceding year of infertility) in FwCF including chronic infections, inflammation, poor lung function, low body weight, and abnormal cervical mucus.

What did you do?

We reviewed the medical charts of 201 FwCF from two centers to find women who conceived after starting ETI treatment. Once identified we looked at their obstetrical – gynecological history (including contraceptive use, prior pregnancies, attempts at conception and desire to



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conceive prior to start of therapy) and changes in BMI and lung function before and after starting ETI.

What did you find?

Between October 2019 to May 2020 14 FwCF became pregnant; seven women were not attempting to conceive and four women had noted a history of infertility. After starting therapy most women became pregnant within 8 weeks. Ten women continued ETI throughout their pregnancy. Most women noted an improvement in their lung function and gained weight. None of the women were hospitalized during their pregnancy due to a CF flare.

What does this mean and reasons for caution?

Within the limited number of women providing data and a short period of evaluation we observed trends towards increased fertility, including in those with prior history of infertility. Further, ETI therapy was tolerated well throughout pregnancy. With the observed pregnancy rates, prescribers at the two clinics have begun emphasizing regular contraceptive use and to consider repeated attempts at conception before making use of advanced fertility technologies.

What's next?

This case series has several limitations including the small number of FwCF from a similar area, short duration of study and the lack of a control group taking dummy medications. We could not prove that the increase in pregnancies that we saw is solely due to ETI. A larger, more rigorous study is currently underway which might confirm our findings.

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<https://pubmed.ncbi.nlm.nih.gov/33353860/>