

Cystic Fibrosis Research News

Title:

Pharmacokinetics and safety of cavosonstat (N91115) in healthy and cystic fibrosis adults homozygous for *F508DEL-CFTR*

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What was your research question?

Cavosonstat inhibits an enzyme that is involved in regulating how much CFTR (the CF protein) is present at the cell surface. It could potentially increase the benefits of other medications that target CFTR function. This study was designed to test the safety of cavosonstat, study its metabolism, and look for effects on sweat chloride.

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Why is this important?

Current medications that are used to improve CFTR function in patients with the common CF mutation (F508del) are only partially effective. The use of cavosonstat could potentially improve the effectiveness of these drugs.

What did you do?

We conducted a series of clinical trials in 39 healthy volunteers and people with CF to study how cavosonstat is metabolized, to test its safety, and to look for possible effects on sweat chloride measurements (which reflect CFTR function) and lung function. One of 3 cavosonstat doses (50 mg, 100 mg, 200 mg, or placebo taken twice daily) were taken for 28 days by 51 CF patients. These patients were not on other drugs that treat CFTR dysfunction during the study period (i.e. Orkambi, Kalydeco).

What did you find?

Cavosonstat was well absorbed and well tolerated. No significant safety concerns were identified in this study. At the highest dose, a small but significant decrease in sweat chloride was observed in CF subjects. No change in lung function was seen.

What does this mean and reasons for caution?

This study suggests that cavosonstat can safely undergo additional testing in CF patients who are already taking medications that target CFTR function. Until these studies are performed, we will not know whether cavosonstat can increase the benefits experienced by patients taking Orkambi or Kalydeco.

What's next?

We await completion of two phase II trials that are exploring the additive effect of cavosonstat when used along with approved CFTR modulators (Orkambi and Kalydeco).

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