primary studies - published RCT

Ivacaftor in subjects with cystic fibrosis who are homozygous for the F508del-CFTR mutation.

Code: PM22383668 **Year:** 2012 **Date:** 2012 **Author:** Flume PA

Study design (if review, criteria of inclusion for studies)

This was a phase 2 study with a 16-week randomized (4:1), double-blind, placebo-controlled period (part A) and an open-label extension (part B) for subjects who met prespecified criteria.

Participants

subjects with CF who are homozygous for F508del-CFTR.

Interventions

ivacaftor vs placebo.

Outcome measures

safety profile; overall adverse event; change of FEV(1) % predicted from baseline through week 16 (primary end point); sweat chloride

Main results

Part A: The safety profile of ivacaftor was comparable to that of the placebo. The overall adverse event frequency was similar in the ivacaftor (87.5%) and placebo (89.3%) groups through 16 weeks. The difference in the change of FEV(1) % predicted from baseline through week 16 (primary end point) between the ivacaftor and placebo groups was 1.7% (P = .15). Sweat chloride, a biomarker of CFTR activity, showed a small reduction in the ivacaftor vs placebo groups of -2.9 mmol/L (P = .04) from baseline through week 16. Part B: No new safety signals were identified. The changes in FEV(1) or sweat chloride in part A were not sustained with ivacaftor treatment from week 16 to week 40.

Authors' conclusions

These results expand the safety information for ivacaftor and support its continued evaluation. Lack of a clinical effect suggests that a CFTR potentiator alone is not an effective therapeutic approach for patients who have CF and are homozygous for F508del-CFTR.

http://dx.doi.org/10.1378/chest.11-2672

See also

Chest. 2012 Sep;142(3):718-24.

Keywords

Child; Adult; Adolescent; Aminophenols; CFTR Modulators; Genetic Predisposition to Disease; pharmacological_intervention; VX-770; ivacaftor;