primary studies - published RCT

KB001-A, a novel anti-inflammatory, found to be safe and well-tolerated in cystic fibrosis patients infected with Pseudomonas aeruginosa.

Code: PM29292092 **Year:** 2018 **Date:** 2019 **Author:** Jain R

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

Randomized, double-blind, placebo-controlled, repeat-dose study

Participants

169 CF subjects with Pa.

Interventions

KB001-A an anti-PcrV PEGylated monoclonal antibody fragment to the Type III secretion system of Pa. Intravenous 10mg/kg KB001-A or placebo infusions were administered at baseline and weeks 2, 4, 8, and 16, with a 4-week follow-up.

Outcome measures

Sputum inflammatory markers were assessed in a sub-study. Time-to-need for antibiotics was compared between groups

Main results

Of 182 subjects, 169 received at least one infusion of KB001-A (n=83) or placebo (n=86). KB001-A was generally safe and well-tolerated as compared to placebo, with no significant emergent adverse effects other than one serious adverse event of elevated hepatic enzymes of unclear etiology. Time to need for antibiotics did not differ between groups (HR: 1.00; 95% CI: 0.69, 1.45, p=0.995). A 3.2 increase in ppFEV1 from placebo favoring KB001-A was observed at week 16 (95% CI: 1.12, 5.30, p=0.003). Mean changes from baseline in log10 sputum neutrophil elastase (NE) had a non-significant decrease (-0.27, 95% CI: -0.58,0.04, p=0.084) while IL-8 concentrations at week 16 were significantly lower (-0.27, 95% CI: -0.55,0.00, p=0.048) among KB001-A subjects (n=16) relative to placebo (n=13).

Authors' conclusions

KB001-A was safe and well-tolerated and associated with a modest FEV1 benefit and reduction in select sputum inflammatory markers (IL-8). KB001-A was not associated with an increased time to need for antibiotics. The lack of efficacy seen with KB001-A may be due, in part, to the low levels of the type III secretion proteins previously reported in sputum of CF patients chronically infected with Pa.

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See also

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Keywords

Anti-Bacterial Agents; Bacterial Infections; Colonization; Exacerbation; Infection; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Pseudomonas aeruginosa; Pseudomonas; KB001-A; Biological drugs; Anti-Inflammatory Agents; Anti-Inflammatory Agents - excl Steroids;