Other Reviews - - Other Review

Elexacaftor/tezacaftor/ivacaftor in children aged â‰¥6â€…years with cystic fibrosis heterozygous for F508del and a minimal function mutation: Results from a 96-week open-label extension study.

Code: PM40210412 **Year:** 2025 **Date:** 2016 **Author:** Mall MA

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

systematic review of randomized controlled trials (RCTs) and non-RCTs

List of included studies (9)

9 studies (RCTs, 6, non-RCTs, 3; N = 275)

Participants

Children with CF

Interventions

Probiotic supplementation

Outcome measures

Primary outcomes were pulmonary exacerbations, duration of hospitalization and antibiotics, and all-cause mortality. Secondary outcomes included gastrointestinal symptoms, markers of gut inflammation, and intestinal microbial balance.

Main results

A total of nine studies (RCTs, 6, non-RCTs, 3; N = 275) with some methodological weaknesses were included in the review. The pooled estimate showed significant reduction in the rate of pulmonary exacerbation (fixed effects model, two parallel group RCTs and one cross-over trial: relative risk (RR) 0.25, (95 % confidence interval (95 % CI) 0.15,0.41); p

Authors' conclusions

Limited low-quality evidence exists on the effects of probiotics in children with CF. Well-designed adequately powered RCTs assessing clinically meaningful outcomes are required to study this important issue. WHAT IS KNOWN: * Gut dysbiosis is frequent in children with cystic fibrosis due to frequent exposure to pathogens and antibiotics. * Probiotics decrease gut dysbiosis and improve gut maturity and function. What is New: * This comprehensive systematic review shows that current evidence on the safety and efficacy of probiotics in children with cystic fibrosis is limited and of low quality. * Well-designed and adequately powered trials assessing clinically important outcomes are required considering the health burden of cystic fibrosis and the potential benefits of probiotics.

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See also

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Keywords

Probiotics; Immunoregulatory; pharmacological_intervention;