



Extended Research Article

Bisoprolol for patients with chronic obstructive pulmonary disease at high risk of exacerbation: the BICS RCT

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Published May 2025

DOI: 10.3310/TNDG8641

Plain language summary

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Health Technology Assessment 2025; Vol. 29: No. 17

DOI: 10.3310/TNDG8641

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Plain language summary

Chronic obstructive pulmonary disease is a lung disease causing shortness of breath. It has no cure and is a leading cause of death. It affects about 1.2 million people in the United Kingdom and costs the National Health Service around £1.9B each year. People with chronic obstructive pulmonary disease often have symptom 'flare-ups' (exacerbations) that usually need emergency treatment and impact the quality of life.

Bisoprolol is usually used to treat cardiovascular diseases such as high blood pressure and heart failure. In observational research, people with chronic obstructive pulmonary disease who take beta-blockers have been reported to have a reduced chance of having exacerbations. The bisoprolol in chronic obstructive pulmonary disease study tested whether adding bisoprolol to usual chronic obstructive pulmonary disease treatments reduced exacerbations in people with chronic obstructive pulmonary disease.

A total of 515 people with chronic obstructive pulmonary disease from 76 hospitals and general practitioner practices across the United Kingdom took part in the bisoprolol in chronic obstructive pulmonary disease study. They were randomly divided into two groups: one group (259 people) took bisoprolol pills every day and the other group (256 people) took dummy pills. People did not know which group they were in. We followed people for up to 12 months and counted how many exacerbations they had. In both groups, people had on average two exacerbations in 12 months. There was no difference between the groups – so bisoprolol did not reduce the number of exacerbations that people had. The bisoprolol group did not have any more serious adverse events or respiratory side effects than the placebo group.

The COVID-19 pandemic had a major impact on the bisoprolol in chronic obstructive pulmonary disease study: we planned to recruit 1574 patients but were only able to recruit 515; so, the results have to be interpreted with some caution. Nevertheless, the results from the bisoprolol in chronic obstructive pulmonary disease study are important. Although bisoprolol did not reduce exacerbations and cannot be recommended as a treatment for chronic obstructive pulmonary disease, bisoprolol was safe for patients with chronic obstructive pulmonary disease. This important finding means that bisoprolol can be used to treat cardiovascular diseases in patients who have chronic obstructive pulmonary disease.

Health Technology Assessment

ISSN 2046-4924 (Online)

Impact factor: 3.5

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This article

The research reported in this issue of the journal was funded by the HTA programme as award number 15/130/20. The contractual start date was in February 2018. The draft manuscript began editorial review in April 2024 and was accepted for publication in December 2024. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' manuscript and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this article.

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