

Tiotropium for asthma: a suite of four Cochrane reviews

Kayleigh M Kew,¹ David JW Evans,² Debbie E Anderson,³ Karen Dahri,^{4,5} Anne C Boyter³

¹Cochrane Airways, Population Health Research Institute, St George's, University of London; ²Lancaster Patient Safety Research Unit, Royal Lancaster Infirmary; ³Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow; ⁴Vancouver General Hospital, Vancouver, Canada; ⁵Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, Canada

Background

Tiotropium is a long-acting muscarinic antagonist (LAMA) which has proven effective for people with COPD. The Spiriva Respimat® preparation has recently been approved for use in people with asthma, but only when symptoms are not well controlled on LABA/ICS. However, trials have assessed the drug in different situations and against a variety of comparators, and other LAMA preparations are likely to be tested in the future.

Systematic review questions have to be sufficiently broad to give a helpful overview of existing evidence, but not so wide that variation in the included studies leads to summary results that cannot be applied to real life situations.

Objective

Systematically review the use of LAMAs for asthma in a way that is most useful to clinicians, patients, and guideline developers.

Methods

We did a scoping search for existing trials and systematic reviews of tiotropium, and spoke to content experts and guideline panels to inform the development of the protocols.

By completing the scoping and review development as part of a three-year funded programme grant, we were able to complete the reviews in line with guideline requirements.

Results and conclusion

We designed 4 reviews around BTS/SIGN and GINA stepwise care (see diagram). We wrote the protocols to accommodate future studies of other LAMA preparations (e.g. glycopyrronium, aclidinium), but all the evidence is currently for tiotropium.

Three reviews assess the evidence for LAMA add-on to ICS monotherapy at Step 3, using alternative treatment options at that step as comparators. Review 4 looks at the licensed indication of adding LAMA to ICS+LABA for people who have more persistent asthma.

The main findings for each review are given in the four boxes at the bottom of the poster.

How does adding tiotropium at **Step 3** compare with...

- Review 1** Usual low/med ICS?
- Review 2** Increasing ICS dose?
- Review 3** Adding a LABA?

How does adding tiotropium at **Step 4** compare with... **Review 4** Usual ICS+LABA?

STEP 1 Inhaled rescue SABA for mild intermittent asthma

STEP 2 Regular preventer therapy
ICS 200-800 mcg/day

STEP 3 Initial add-on therapy
• Add LABA to low ICS *or* increase to med/high ICS

STEP 4 Persistent poor control
• Med/high ICS+LABA
• Add leukotriene modifier or theophylline

STEP 5 Continuous/frequent OCS use
Lowest possible daily OCS
Maintain high ICS+LABA

