Triple therapy in uncontrolled asthma: a network meta-analysis of phase III studies

Paola Rogliani 1, Beatrice Ludovica Ritondo 1 and Luigino Calzetta 2

1Unit of Respiratory Medicine, Dept of Experimental Medicine, University of Rome “Tor Vergata”, Rome, Italy. 2Dept of Medicine and Surgery, Respiratory Disease and Lung Function Unit, University of Parma, Parma, Italy.

Corresponding author: Paola Rogliani (paola.rogliani@uniroma2.it)

Shareable abstract (@ERSpublications)
Triple combination therapy by adding either a LAMA to ICS/LABA FDC or escalating ICS on a background of ICS/LABA/LAMA FDC may reduce severe exacerbations and improve lung function; adding a LAMA along with escalating ICS provides incremental effects https://bit.ly/39NuNKb


This single-page version can be shared freely online.

Abstract
Conflicting evidence is currently available concerning the impact on asthma exacerbation of triple inhaled corticosteroid (ICS)/long-acting β₂-adrenoceptor agonist (LABA)/long-acting muscarinic receptor antagonist (LAMA) fixed-dose combination (FDC).

Since meta-analyses allow settling controversies of apparently inconsistent results, we performed a network meta-analysis of phase III randomised controlled trials including 9535 patients to assess the effect of ICS/LABA/LAMA combinations in uncontrolled asthma.

Triple combination therapies with an ICS administered at high dose (HD) were more effective (p<0.05) than medium-dose (MD) ICS/LABA/LAMA FDC and both MD and HD ICS/LABA FDCs against moderate to severe exacerbation (relative risk 0.61–0.80) and increasing trough forced expiratory volume in 1 s (from +33 to +114 mL). Triple combination therapies including HD ICS were superior (p<0.05) to MD ICS/LABA/LAMA FDC in preventing severe exacerbation (relative risk 0.46–0.65), but not with respect to moderate exacerbation (p>0.05). Triple combination therapies were equally effective on asthma control, with no safety concerns.

This quantitative synthesis suggests that ICS/LABA/LAMA FDCs are effective and safe in uncontrolled asthma, and that the dose of ICS in the combination represents the discriminating factor to treat patients with a history of moderate or severe exacerbation.