P228 EFFICACY AND SAFETY OF FLUTICASONE PROPIONATE/FORMOTEROL IN PAEDIATRIC PATIENTS WITH ASTHMA

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Background Fluticasone propionate (FP) and formoterol (FORM) have been combined in a single inhaler (FP/FORM;***flutiform***®) for the treatment of adolescents and adults with asthma. This study assessed the efficacy and safety of FP/FORM in paediatric asthma patients.

Methods A total of 512 patients aged 5 to <12yrs were randomised 1:1:1 to 12 weeks of treatment with either FP/FORM (100/10 µg BID), FP (100 µg BID) or fluticasone propionate/salmeterol (FP/SAL) (100/50 µg BID) in a double-blind, parallel group, multicentre study. The objectives were to demonstrate superiority of FP/FORM to FP and non-inferiority to FP/SAL. The primary endpoint was the change from predose FEV1 at baseline to 2-hour postdose FEV1 over the 12 weeks. The two key secondary endpoints were FEV1 AUC0–4h at Week 12 and change from pre-dose FEV1 over the 12 weeks.

Results FP/FORM was superior to FP for change from predose FEV1 at baseline to 2-hour postdose FEV1 (treatment difference = 0.07 L; 95% CI: 0.03, 0.11; p < 0.001) and FEV1 AUC0–4h at Week 12 (treatment difference = 0.09 L; 95% CI: 0.04, 0.13; p < 0.001). FP/FORM was non-inferior to FP/SAL for change from predose FEV1 at baseline to 2-hour postdose FEV1 (treatment difference = -0.00 L; 95% CI: -0.04, 0.04; p < 0.001), AUC0–4h at Week 12 (treatment difference = 0.01 L; 95% CI: -0.03, 0.06; p < 0.001) and change from predose FEV1 (treatment difference = -0.02 L; 95% CI: -0.06, 0.02; p < 0.001). The safety and tolerability profiles of all treatments were similar.

Conclusion In children 5 to <12yrs with asthma, FP/FORM was superior to FP, and non-inferior to FP/SAL for improvements in lung function, with a similar tolerability profile to both FP and FP/SAL.

P229 ONCE-DAILY TIOTROPIUM RESPIMAT® AS ADD-ON TO AT LEAST MEDIUM- TO HIGH-DOSE ICS, WITH OR WITHOUT LABA, IMPROVES LUNG FUNCTION IN PATIENTS WITH SYMPTOMATIC ASTHMA, INDEPENDENT OF ALLERGIC STATUS

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Background A substantial number of patients have symptomatic asthma despite treatment according to guidelines. Several studies have confirmed that tiotropium Respimat®, a once-daily long-acting anticholinergic bronchodilator, improves lung function in symptomatic patients receiving at least medium-dose inhaled corticosteroids (ICS) + long-acting β_2-agonist (LABA) (Kerstjens *et al*. NEJM 2012;367:1198–207; Bateman *et al*. JACI 2011;128:315–22). Here we examine whether the atopic and/or allergic status of patients in these trials influenced their response to tiotropium Respimat®.

Method Two 48-week trials of tiotropium Respimat® 5 µg (PrimoTinA-asthma®: NCT00776984, NCT00772538) in patients (n = 912) on high-dose ICS + LABA; two 24-week trials of tiotropium Respimat® 5 µg and 2.5 µg (MezzoTinA-asthma®: NCT01172808, NCT01172821) in patients (n = 2100) on moderate-dose ICS. Pre-planned analyses (pooled populations) were performed in two subgroups defined at baseline as total serum immunoglobulin E (IgE) ≤ or >430 µg/L or blood eosinophils ≤ or $>0.6\times10^9$/L or clinical judgement of allergic status ('No' or 'Yes'). All tiotropium doses were delivered via the Respimat® SoftMist™ inhaler.

Results Tiotropium Respimat® 5 µg or 2.5 µg improved peak and trough forced expiratory volume in 1 second versus placebo (Table) independent of IgE, eosinophil count and clinical judgement.

Abstract P229 Table 1

Adjusted mean difference for tiotropium Respimat® from placebo (mL)		IgE ≤/ >430 µg/L	Interaction p value[a]	Eosinophils ≤/>0.6×10^9/L	Interaction p value[a]	Clinical judgement 'No' or 'Yes'	Interaction p value[a]
	n[b]	336/377		654/175		335/516	
	Peak FEV_1 (0–3h)	148/102	0.742	115/58	0.7021	76/130	0.2114
PrimoTinA-asthma®	Trough						
Tiotropium Respimat® 5 µg	FEV_1	127/89	0.6209	103/52	0.7542	94/91	0.4099
	n[b]	356/610		769/201		349/624	
	Peak FEV_1 (0–3h)	168/193	0.9677	170/240	0.2375	180/189	0.6233
MezzoTinA-asthma®	Trough						
Tiotropium Respimat® 5 µg	FEV_1	139/152	0.8437	137/182	0.5148	138/153	0.6727
	n[b]	364/614		779/203		349/635	
	Peak FEV_1 (0–3h)	197/237	0.9677	236/176	0.2375	243/213	0.6233
MezzoTinA-asthma® Tiotropium Respimat® 2.5 µg	Trough FEV_1	167/188	0.8437	185/158	0.5148	209/164	0.6727

[a]For treatment×subgroup interaction; [b]Values for active and placebo groups combined
FEV_1, forced expiratory volume in 1 second