Conclusions T+O FDCs were safe and well tolerated. In comparison to the individual components, there was no notable increase in AEs with T+O FDCs.

P257 SUB-OPTIMAL INHALER TECHNIQUE IN PATIENTS AGED OVER 75 YEARS

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Introduction and objectives NICE guidelines highlight the importance of adequate inhaler technique to ensure sufficient drug delivery in asthma and C. O. P. D. Whilst adequate inhaler technique can be a problem for patients of any age, the delivery of inhaled medication continues to be a particular problem for elderly patients. Despite the existence of pressurised metered-dose inhalers and breath-actuated inhalers, physical and cognitive impairment continues to make the use of hand-held inhalers difficult in the elderly. It is therefore likely that inhaler use in the elderly is suboptimal, regardless of device used.

Methods We assessed 50 consecutive patients aged over 75 years with C. O. P. D or asthma at our centre (mean age 78.24 ± 7.32). All had inhaler therapy prescribed prior to examination. Two observers assessed inhaler technique against guidelines adapted from the National Asthma Council of Australia¹ (see Table). Patients used either an Evohaler (pressurised metered-dose inhaler) or Accuhaler (breath-actuated inhaler) according to their choice.

Results In the Evohaler group (25 patients), the average age was 78 (±5.5) with an average score of 6.6 (±1.81) / 10. In the Accuhaler group (25 patients), average age was 77 (±6.4) with an average score of 7.2 (±2.0) / 10. 'Crucial' steps to adequate inhaler technique were also assessed.² The score in the Evohaler group was 4.4 (±1.2) / 6, and in the Accuhaler group was 4.3 (±1.0) / 6.

Conclusion This study shows that despite the availability of both Evohaler (pressurised metered-dose inhaler) and Accuhaler (breath-actuated inhaler) effective use by the elderly is still sub-optimal. The very elderly need extra support when considering and prescribing inhalers. Whilst many centres have 'good inhaler technique' as a pillar of their COPD care bundle, it may be the case that specialist services, including the use of specialist devices, directed at the elderly may help to alleviate the problems of physical and cognitive impairment when using inhalers.

Abstract P257 Table 1

Step	EVOHALER	ACCUHALER
1	Remove cap	Open using thumb grip
2	Hold inhaler upright and shake	Load dose by sliding lever until it clicks
3	Breathe out	Breathe out
4	Put mouthpiece between lips, close lips to form seal	Put mouthpiece between lips, close lips to form seal
5	Breathe in and press down	Breathe in steadily
6	Continue to breathe in	Continue to breathe in
7	Hold breath 10 secs	Hold breath 10 secs
8	Remove inhaler	Remove inhaler
9	Breathe out	Breathe out
10	Replace cap	Close cover

REFERENCES

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- 2 Newman S. P. Inhaler treatment options in COPD. *Eur Respir Rev* 2005;14 (96):102-108

P258 THE 24-HOUR LUNG FUNCTION PROFILE OF ONCE-DAILY TIOTROPIUM AND OLODATEROL FIXED-DOSE COMBINATION COMPARED WITH PLACEBO AND MONOTHERAPIES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Introduction Tiotropium (T), a once-daily long-acting muscarinic antagonist, is a well-established first-line maintenance treatment in chronic obstructive pulmonary disease (COPD). Olodaterol (O) is a once-daily long-acting β_2 -agonist, recently approved in several EU countries. This study investigated the 24-hour bronchodilator profile of once-daily fixed-dose combinations (FDCs) of T and O delivered via the Respimat® Soft Mist™ inhaler in patients with Global initiative for chronic Obstructive Lung Disease 2–4 COPD.

Methods This double-blind, placebo-controlled, Phase III, incomplete crossover study randomised 219 patients to receive four of the following treatments for 6 weeks (with a 3-week washout period in between): placebo, O 5 μ g, T 2.5 μ g, T 5 μ g, T+O FDC 2.5/5 μ g, T+O FDC 5/5 μ g. The primary end point was forced expiratory volume in 1 second (FEV₁) area under the curve from 0–24 h (AUC_{0–24}) after 6 weeks. Secondary end points included additional spirometric parameters over 24 h and body plethysmography parameters in a sub-set of patients (2:30 and 22:30 h post-dose).

Results The 24-hour time profiles for both FDCs were similar, with clear, consistent increases in FEV₁ compared to placebo and monotherapies. For FEV₁ AUC_{0–24}, both FDCs were significantly superior to placebo (T+O 5/5 μ g: 0.280 L, p < 0.0001; T+O 2.5/5 μ g: 0.277 L, p < 0.0001) and monotherapies (T+O 5/5 μ g: 0.110–0.127 L, p < 0.0001; T+O 2.5/5 μ g: 0.107–0.124 L, p < 0.0001). There were significantly greater increases in trough FEV₁ with both FDCs compared to placebo (0.201–0.207 L, p < 0.0001) and monotherapies (T+O 5/5 μ g: 0.079–0.107 L, p < 0.0001; T+O 2.5/5 μ g: 0.073–0.101 L, p < 0.0001). In the body plethysmography sub-study, both FDC doses separated from

Abstract P258 Figure 1 Adjusted mean Fev₁ over 24 h post dose after 6 weeks of treatment (full analysis set)