Treatment and adherence in asthma

S32 COMBINATION FIXED-DOSE BETA AGONIST AND STEROID INHALER AS REQUIRED FOR ADULTS OR CHILDREN WITH MILD ASTHMA: A COCHRANE SYSTEMATIC REVIEW

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10.1136/thorax-2021-BTSabstracts.38

Background We aimed to evaluate the efficacy and safety of single combined fast-acting beta$_2$-agonist/inhaled corticosteroid (FABA/ICS) inhaler only used as needed in people with mild asthma.

Methods We performed a Cochrane meta-analysis of randomised trials utilising as-required FABA/ICS inhalers for >12 weeks.[1] Primary outcomes included exacerbations requiring systemic steroids, asthma-related hospital or urgent care visits and measures of asthma control.

Results Six studies met our inclusion criteria (n=9,657 participants).

Compared with as-required FABA alone, as-required FABA/ICS reduced exacerbations requiring systemic steroids (OR 0.45, 95% CI 0.34 to 0.60, high-certainty evidence). FABA/ICS as-required may also reduce the odds of asthma-related hospital or urgent care visits (OR 0.35, 95% CI 0.20 to 0.60, low-certainty evidence). Changes in asthma control and spirometry were less than the minimum clinically-important difference (MCID). FABA/ICS as-required was associated with reductions in FENO, probably reduces the odds of adverse events (OR 0.82, 95% CI 0.71 to 0.95) and may reduce total systemic steroid dose (MD -9.90, 95% CI -19.38 to -0.42).

Compared with regular ICS plus FABA as-required, there may be little or no difference in the number of people with asthma exacerbations requiring systemic steroid with FABA/ICS as-required (OR 0.79, 95% CI 0.59 to 1.07, low-certainty evidence). The odds of asthma-related hospital or urgent care visits may be reduced in those taking FABA/ICS as-required (OR 0.63, 95% CI 0.44 to 0.91, low-certainty evidence).

Changes in asthma control, spirometry or asthma-associated quality of life, were less than the MCID. Adverse events, total systemic corticosteroid dose and mortality were similar between groups. FABA/ICS as-required was likely associated with reduced daily exposure to inhaled corticosteroids compared to regular ICS (MD -154.51 mcg/day, 95% CI -207.94 to -101.09).

Conclusions FABA/ICS as-required is clinically effective in adults and adolescents with mild asthma. It reduced exacerbations, hospital admissions, unscheduled healthcare visits, exposure to systemic corticosteroids and probably reduces adverse events compared with FABA as-required alone. FABA/ICS as-required is as effective as regular ICS and reduced asthma-related hospital admissions or unscheduled healthcare visits, and average exposure to ICS, and is unlikely associated with increased adverse events.

REFERENCE

1. Cochrane Database Syst Rev 2021;5:CD013518.

Please refer to page A188 for declarations of interest related to this abstract.

S33 A PRAGMATIC, RANDOMISED CONTROLLED TRIAL OF A TAILORED PULMONARY REHABILITATION PACKAGE IN DIFFICULT-TO-CONTROL ASTHMA ASSOCIATED WITH ELEVATED BODY MASS INDEX

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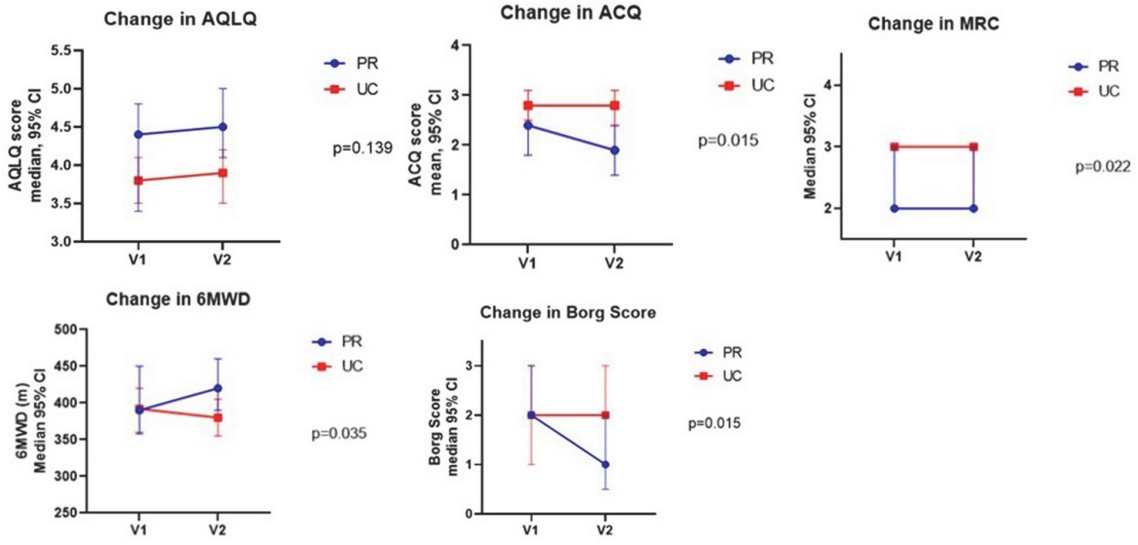
10.1136/thorax-2021-BTSabstracts.39

Background Difficult-to-control asthma associated with elevated body mass index (BMI) represents a significant challenge, with limited treatment options. The effects of pulmonary rehabilitation (PR) in this population are uncertain.



Abstract S33 Figure 1

Methods This randomised controlled trial compared an asthma-tailored PR programme to usual care (UC) in participants with uncontrolled asthma and BMI ≥25 kg/m^2. PR comprised an hour of education and of exercise each week for eight weeks. Primary outcome was difference in change in Asthma Quality of Life Questionnaire (AQLQ) in PR versus UC groups post intervention. Secondary outcomes included difference in change in other asthma outcomes including asthma control questionnaire-6 (ACQ6), Medical Research Council (MRC) dyspnoea score, six-minute walk distance (6MWD) and post-exercise Borg breathlessness score. Responder analyses compared proportions reaching the minimum clinically important difference (MCID) for AQLQ and ACQ6.

Results 95 participants were randomised 1:1 to PR or UC; median age was 54, with 60% female and median BMI 33.8kg/m^2. 18 participants withdrew prior to second visit, meaning 77 were included in analysis. Median (IQR) change in AQLQ was not significantly different: 0.3(-0.2 to 0.6) in PR and -0.1(-0.5 to 0.4) in UC, p= 0.139. There was no difference in proportion reaching MCID for improvement in AQLQ: 13(39%) in PR and 10(23%) in UC, p=0.184. Mean change in ACQ6 was significantly different: -0.4(95% CI -0.6 to -0.2) in PR and 0(-0.3 to +0.3) in UC, p=0.015*. In ACQ6 responder analysis, MCID was reached by 18 participants in PR group (54.5%) versus 10 in UC (22.7%), p=0.009*. Changes in MRC dyspnoea score (p=0.022*), 6MWD (p=0.035*) and Borg breathlessness (p=0.015*) were significantly different in favour of PR. A post-hoc analysis of PR group revealed baseline FeNO was significantly lower in ACQ6 responders (median (IQR) 18(8.5–41)) than non-responders (47(17–71)), p=0.020*; and in AQLQ responders (14 (8.5–44.5)) compared to non-responders (40(19–71)), p=0.038*.

Conclusion Pulmonary rehabilitation improves asthma control and reduces perception of breathlessness in participants with difficult-to-control asthma associated with elevated BMI. It should be considered as additional therapy for this group. Lower FeNO in PR responders suggests it may be of most value in type-2 low phenotype obese asthma.

S34 A MULTI-DISCIPLINARY APPROACH ENSURING SUCCESSFUL TRANSITION FROM PAEDIATRIC TO ADULT ASTHMA CARE – A FOCUS ON TREATMENT ADHERENCE

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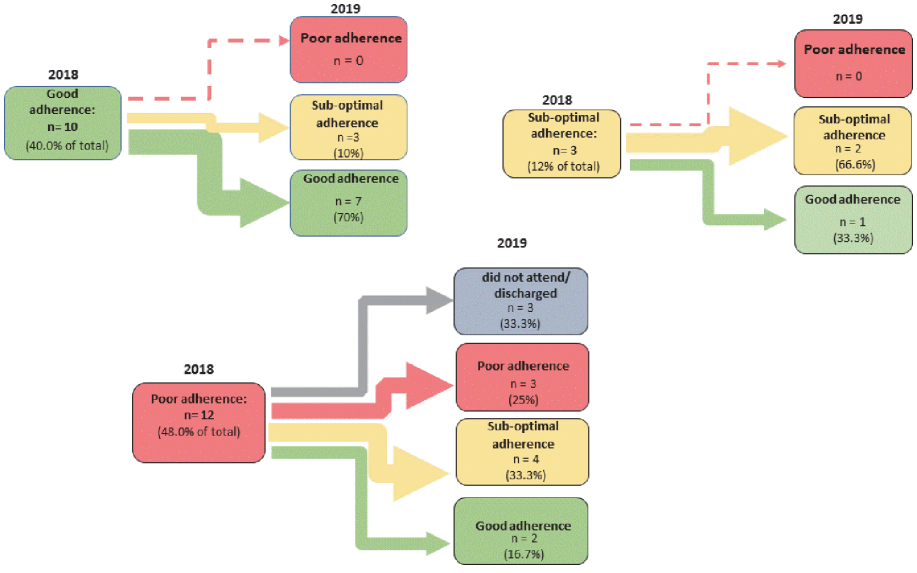
10.1136/thorax-2021-BTSabstracts.40

Background Adolescence is a high-risk time for young asthma patients, with increased risk of asthma-related morbidity and mortality. Evidence suggests that in adolescence, over half of prescribed inhaled corticosteroid (ICS) prescriptions are not adhered to. This, a modifiable cause of troublesome symptoms, significant risk of exacerbations and death, warrants attention. Adolescents with severe asthma are seen at Guy's Young Adult Asthma Service (YAAS), having transitioned from the Children's Hospitals at King's College Hospital and the Evelina, where they are seen jointly by paediatric and adult teams during the transition period. They are supported during that time by a dedicated multi-disciplinary team including pharmacists supporting adherence.

Methods We conducted a retrospective review of patients transitioning from the paediatric teams to YAAS between October 2018 and September 2019. Patient's demographic and clinic characteristics and their adherence, quantified via Medicines Possession Ratio (MPR), the number of prescriptions issued compared with those expected to be issued, were recorded at the last joint paediatric-adult clinic appointment (transition) and again after 12 months within the adult service. Adherence was defined as poor < 50% MPR, suboptimal < 75% MPR and optimal >75% MPR.

Results 25 patients (68% female) with a mean age of 17.89 (±0.83) transitioned to the adult service. At transition, adherence was optimal in 10/25 (40%), suboptimal in 3 (12%) and poor in 12 (48%) patients. The mean blood eosinophil count (BEC) was 0.41 x10^9/l (±0.33), fraction of exhaled nitric oxide (FeNO) 73.2 ppb (±59) and FEV1% predicted 89% (±10.7). After 12 months, 22/25 patients remained under the



Abstract S34 Figure 1 Change in adherence patterns over 12 months