P67 IMPLEMENTING BTS ASTHMA DISCHARGE BUNDLE IMPROVES DISCHARGE PLANNING IN CHILDREN

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Introduction The Challenge The 2015 BTS Paediatric Asthma Audit had showed unit's performance at delivering a Written Management Plan (WMP) at discharge to have deteriorated to 2%. The same audit found a national average of 50%. We were concerned about how to improve this. In 2016 the BTS introduced the Asthma Care Bundle.

Method We asked staff why they did not always use the bundle. We designed A4 posters, an A4 mouse mat, group training delivered by nursing staff, real time private one to one feedback to nurses and doctors who forgot to use the bundle, group teaching by a nurse (VM), regular reminders by a consultant of the audit (JF) and an audit by a medical student (NP). A department Asthma Care Pathway was updated (LN) to encourage staff to use the discharge bundle. NP and did a retrospective case note audit of admissions between 1/9/16 to 20/1/2017 comparing the number of children discharged with a new and previous WMP who had an asthma care pathway (ACP), diagnosis of asthma, on inhaled corticosteroids (ICS) and those between 2–5 years and over 5 years of age.

Results

Abstract P67 Table 1 The number of children with WMP in the different categories

Patients with WMP					
	ICS	Diagnosis Asthma	ACP	New WMP	Previous WMP
2–5	22	17	16	13	5
Over 5 s	23	31	20	17	7

The use of WMP at discharge rose to 50% for children diagnosed with asthma and 80% for those using an Asthma Care Pathway including the BTS Asthma Care Bundle.

Conclusions and Implications Implementing the BTS discharge bundle in paediatrics is hard work. The neglect of this hard work is associated with a decrease in WMP use. Multiple tools and clear guidelines were effective at improving use by staff. Most important appears to be the use an ACP.

P68 ASTHMA SYMPTOM IMPROVEMENTS WITH BENRALIZUMAB ARE ASSOCIATED WITH IMPROVEMENTS IN ACTIVITY FUNCTIONS AND QUALITY OF LIFE FOR PATIENTS WITH SEVERE, UNCONTROLLED ASTHMA: RESULTS OF POOLED PHASE III BENRALIZUMAB STUDIES

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Introduction and Objectives Benralizumab is an anti-eosinophilic monoclonal antibody that improves daily symptoms for patients with severe, uncontrolled asthma with eosinophilic inflammation. This study evaluated the association of asthma symptom improvements with activity function and health-related quality of life assessments.

Methods Pooled analyses of two Phase III benralizumab trials (NCT01928771, NCT01914757) of adult patients with severe asthma (1474 benralizumab, 742 placebo) who received high-dosage inhaled corticosteroids/long-acting β_2-agonists were conducted. Daily asthma symptoms (daytime and night-time symptoms), daily activity function (activity limitations, activity avoidance, need to pace oneself during activities), feeling stress, feeling tired, rescue medication use, night-time awakenings, Asthma Control Questionnaire, 6-question version (ACQ-6), and Standardised Asthma Quality of Life Questionnaire for patients 12 years and older (AQLQ[S]+12) were captured with an electronic diary. Daily assessments were summarised as biweekly means. Spearman's rank correlation coefficient was used to examine the association of daily asthma symptoms with other aforementioned diary items and with forced expiratory volume in 1 s (FEV_1). Associations of <0.2, 0.2–<0.4, 0.4–<0.6, 0.6–<0.8, and 0.8–1.0 were considered "very weak," "weak," "moderate," "strong," and "very strong," respectively.

Abstract P68 Table 1 Spearman's Rho correlation between asthma-related symptoms and other patient-reported outcomes and FEV_1 at baseline and end of treatment

Variables For Correlation	Baseline		Change From Baseline to End of Treatment	
	Benralizumab	Placebo	Benralizumab	Placebo
Daily diary assessments				
Activity function: Limitation of activities	0.77	0.76	0.73	0.66
Activity function: Avoidance of activities	0.76	0.73	0.72	0.67
Activity function: Need to pace self	0.76	0.72	0.71	0.66
Feeling tired	0.76	0.72	0.70	0.66
Feeling stressed	0.50	0.48	0.49	0.36
Percentage of night-time awakening	0.65	0.62	0.48	0.45
Total rescue medication use (puffs per day)	0.57	0.56	0.51	0.49
ACQ-6 score	0.68	0.68	0.64	0.58
AQLQ(S)+12				
Overall	−0.60	−0.55	−0.61	−0.52
Symptoms	−0.62	−0.59	−0.61	−0.53
Activity limitation	−0.54	−0.50	−0.55	−0.48
Emotional function	−0.47	−0.44	−0.54	−0.41
Environmental stimulation	−0.37	−0.33	−0.42	−0.35
Pre-bronchodilator FEV_1 (L)	−0.09	−0.08	−0.21	−0.13

ACQ-6, Asthma Control Questionnaire, 6-question version; AQLQ(S)+12, Standardised Asthma Quality of Life Questionnaire for patients 12 years and older; FEV_1, forced expiratory volume in 1 s. All p<0.05

Results Associations were observed between asthma symptoms and daily activity function items, daily stress, ACQ-6, AQLQ(S)+12 overall and domain scores, and FEV_1 at baseline and change from baseline to end of treatment in both benralizumab and placebo arms (table). Strong correlations were

observed between daily symptoms and daily assessments of activity function items (r=0.66–0.77), feeling tired (r=0.66–0.76), and ACQ-6 scores (r=0.58–0.68) at baseline and change from baseline to end of treatment. Moderate correlations were observed between symptom scores and feeling stressed (r=0.36–0.50); rescue medication use (r=0.49–0.57); and AQLQ(S)+12 overall and symptoms, activity limitation, and emotional domains (r=−0.41–0.62). Although a very weak correlation between symptom improvement and FEV_1 was expected, benralizumab-treated patients had a better correlation between symptom improvement and FEV_1 improvement compared with placebo (r=−0.21 vs. −0.13), possibly because of substantial FEV_1 improvement observed in benralizumab-treated patients.

Conclusions Asthma-related symptoms and improvements are associated with other important aspects of improvement in patient well-being, especially for patients uncontrolled on optimal care.

P69 FUNCTIONALITY, RELIABILITY, AND PERFORMANCE OF AN ACCESSORISED PRE-FILLED SYRINGE WITH HOME-ADMINISTERED SUBCUTANEOUS BENRALIZUMAB FOR ADULT PATIENTS WITH SEVERE ASTHMA

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Introduction and Objectives Benralizumab, a humanised anti-eosinophil monoclonal antibody, is in development as an add-on treatment for severe, uncontrolled, eosinophilic asthma. During Phase III trials, benralizumab significantly reduced annual asthma exacerbation rates and was well-tolerated.[1,2] The GREGALE study (NCT02417961) assessed patient and caregiver-reported functionality, performance, and reliability of an accessorised pre-filled syringe (APFS) used to administer benralizumab subcutaneously in an at-home setting.

Methods Patients (n=116) with severe, uncontrolled asthma despite receiving medium- or high-dosage inhaled corticosteroids and long-acting β_2-agonists, received up to five APFS-administered subcutaneous doses (Weeks 0, 4, 8, 12, and 16) of 30 mg benralizumab. The first three doses were administered at the study sites. The patient/caregiver administered the last two doses at home. Endpoints included the percentage of patients/caregivers who successfully administered benralizumab at home, percentage of APFS returned to study sites and evaluated as functional, percentage of APFS returned as malfunctioning to Product Complaints, efficacy (Asthma Control Questionnaire 6 [ACQ-6]), safety, and pharmacodynamics (blood eosinophil count).

Results Nearly all patients and caregivers successfully administered benralizumab with an APFS at home (Week 12: 112/114, 98%; Week 16: 108/109, 99%; figure 1). Two at-home administrations were unsuccessful because of patient-use error. One APFS was recorded as nonfunctional because it was not returned for evaluation. Product Complaints identified only 1 APFS malfunction of 573 dispensed. Mean ACQ-6 scores decreased from baseline through all postbaseline time points through end of treatment (baseline: mean 2.14 [standard deviation {SD} 0.81]; Week 20: mean 1.40 [SD 0.90]). Near-complete depletion of eosinophils was observed at end of treatment vs. baseline (baseline: median 250 cells/μL [interquartile range {IQR} 175–430 cells/μL]; and Week 20: median 0 cells/μL [IQR 0–10 cells/μL]). Incidence of adverse events leading to benralizumab discontinuation was 2.6%. Most common adverse events (≥5% of patients) were nasopharyngitis, upper respiratory tract infection, headache, and sinusitis. Five patients (4.3%) experienced transient mild or moderate injection-site reactions.

Conclusions Most patients and caregivers successfully administered benralizumab in an at-home setting. The APFS was functional, reliable, and performed well.

Please refer to page A258 for declarations of interest in relation to abstract P69.

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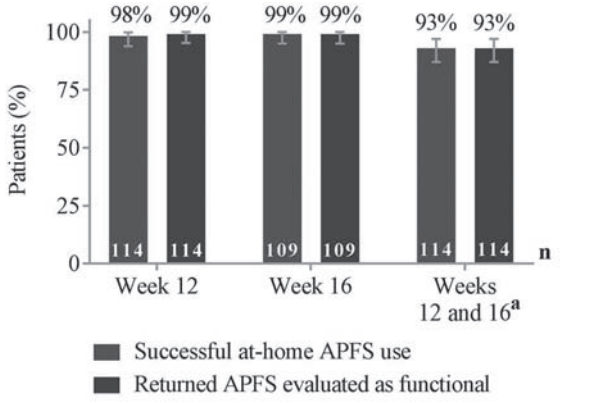

APFS, accessorized pre-filled syringes.

[a]Includes patients who were qualified for home-administration and were still in the study at Week 12.

Error bars represent 95% confidence intervals calculated using the Clopper-Pearson exact method.

Abstract P69 Figure 1 Percentage of patients and caregivers who used an APFS successfully at home and returned APFS evaluated as functional.

P70 RELATION BETWEEN BRONCHIAL ASTHMA AND PARASITIC (NEMATODES) INFECTION IN EGYPTIAN CHILDREN

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Background Among the many factors influencing the prevalence of asthma in developing countries from the tropics are geo-helminthic infections.

Aims This work aims to study the relation between bronchial asthma and parasitic infestation in Egyptian children.

Patients and Methods A cross-section, analytical study design was chosen to perform this research on 100 school aged children. All children were interviewed and examined clinically and laboratory.