Asthma phenotyping and biomarkers

P66 CAN WE IDENTIFY ASTHMA AND COPD OVERLAP SYNDROME (ACOS) FROM A SEVERE DIFFICULT ASTHMA CLINIC PATIENT COHORT?

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Introduction Asthma-COPD Overlap Syndrome (ACOS) is characterised by persistent airflow limitation with several features usually associated with asthma and several features usually associated with COPD, which can be difficult to define. In response to the document produced by GINA and GOLD (2014) there is a need for further studies to identify the proportion of ACOS patients within treatment centres. Patients with features of ACOS are reported between 15–55% and have outcomes that are far worse than COPD or asthma alone.[1]

Objectives To locally identify the proportion and current management of ACOS patients within a tertiary treatment centre.

Method The study was carried out retrospectively reviewing patient data over a 6 month period from electronically documented clinic letters, discharge summaries, pathology and lung function results. Patients included were identified from a severe difficult asthma clinic list at a large tertiary centre in London.

Results 101 patients were reviewed with a mean age of 49.1 years. Table 1 identifies patients with chronic airflow limitation with a cohort of 6.9% (n = 7) diagnosed as asthma and COPD; showing fixed airway obstruction (n = 6), mean age 54.6 years. There are no patients receiving LABA mono therapy, however 7.9% patients have no ICS in their treatment plan.

Abstract P66 Table 1

		Patient Cohort (n = 101)	Mean
FEV1/FVC	≤ 70%	50.5% (n = 51)	67.6%
	>70%	49.5% (n = 50)	
Blood Eosinophil	<0.5 (×10^9/L)	63.4% (n = 64)	0.5
	≥0.5 (×10^9/L)	27.7% (n = 28)	
Blood Neutrophil	<7.0 (×10^9/L)	70.3% (n = 71)	5.5
	≥7.0 (×10^9/L)	20.8% (n = 21)	
Total IgE	<81	18.9% (n = 19)	357
	≥81	43.6% (n = 44)	
Smoking History	Non Smoker	54.5% (n = 55)	
	Ex Smoker	22.8% (n = 23)	
	Smoker	9.9% (n = 10)	
BTS/SIGN STEP 4–5		39.6% (n = 40)	
BDP equivalence range		400–4000	1705
Doctor diagnosed as Asthma and COPD		6.9% (n = 7)	
Current Treatment	SAMA Monotherapy	2.0% (n = 2)	
	LAMA Monotherapy	3.0% (n = 3)	
	ICS Monotherapy	4.0% (n = 4)	
	ICS/LABA	77.2% (n = 78)	
	Omalizumab	11.9% (n = 12)	
	Non - ICS	7.9% (n = 8)	

ACOS can potentially be identified in 10 patients with a raised IgE and eosinophil count, FEV1/FVC ≤ 70% showing fixed airway obstruction who are listed as non-smokers; these patients are currently on ICS/LABA treatment.

Conclusion This review of severe difficult asthma clinic patients highlights the challenge in identifying ACOS patients. Spirometry results documented are of limited value in diagnosis between asthma, COPD and ACOS; reversibility testing would be more indicative for future work. Interestingly we have a relatively young patient population on high BDP doses and some potentially at risk due to no ICS treatment. Further prospective studies in the form of patient questionnaires is required in order to identify detailed clinical history to aid earlier diagnosis and management.

REFERENCE

1 Diagnosis of Diseases of Chronic Airflow Limitation: Asthma, COPD, and Asthma – COPD Overlap Syndrome (ACOS). GINA and GOLD, 2014

P67 BRONCHIECTASIS IN SEVERE UNCONTROLLED ASTHMA

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Introduction and objectives Bronchiectasis can contribute to severe and difficult to control asthma. It is important to recognise bronchiectasis in asthmatics and treat them accordingly. In order to estimate the presence of bronchiectasis in severe asthma, and the relation with the clinical and functional parameters we studied 40 patients with severe uncontrolled asthma, in a stable condition.

Methods The symptoms, the duration of asthma diagnosis, the number of exacerbations/year, cycles of corticosteroids and antibiotic treatment/year, spirometry, and bronchial colonisation were estimated. High resolution computed tomography (HRCT) was performed to evaluate the presence and extent of bronchiectasis. HRCT were studied by an expert thoracic radiologist, according to Smith scale for bronchiectasis (score 0–24), taking a score≥3 as radiologically significant.

Results Forty patients were studied, 28 women, mean age (±SD) 57.9 years (±12.4), 32 non smokers. Mean ACT score was 14.2 (±4.9).

The main symptoms were: cough (92%), wheezing (95%), dyspnea (92%), sputum production (72%) of which mucoid (52%), mucopurulent and purulent (48%). Mean duration of asthma diagnosis was 16.5(±11.5) years, exacerbations: 4.4 (±2.7)/year, corticosteroid per os cycles/year: 4.4 (±3.1), antibiotic cycles/year: 2.8(±2.2).

In 27 patients (67,5%) bronchiectasis was diagnosed: Smith score: 5.2(±4.2).

The mean FEV_1 was 72.6% (±21.1) of predicted, FVC 79.1% (±19.4), FEV_1/FVC ratio 67.3 (±9.7). Nine patients (22.5%) were colonised with pathogens, 6 of whom with Pseudomonas Aeruginosa. Patients with sputum production had a higher Smith score compared to those without expectoration (6.3 ± 4.2 vs 2.3 ± 2.2 respectively Z = 2.8, p = 0.005). In addition, patients with pathogens in sputum cultures had a higher Smith score compared to those with normal flora (10 ± 4.2 vs 3.8 ± 3 respectively, Z = 3.5, p < 0.0001) (Figure 1).