part of our new multisystem, comprehensive, holistic assessment of COPD patients.

REFERENCE

1. Joliffe, *et al*. Prevalence, determinants and clinical correlates of Vitamin D deficiency in patients with chronic obstructive pulmonary disease in London, UK., 2017. J Steroid Biochem Mol Biochem.

P92 EFFICACY OF BETA BLOCKERS PRESCRIBED AMONG COPD PATIENTS WITH CONCOMITANT HEART FAILURE

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Background Due to common risk factors, there is considerable number of COPD patients who has concomitant heart failure. There is always reluctance in prescribing beta blockers in patients with COPD, though recent literature has supported the use of cardio-selective beta blockers among these patients. We conducted this study to determine the effect of cardio-selective beta blockers on dyspnea grade and exacerbation rate among COPD patients with concomitant heart failure.

Methods This was a prospective cohort study among COPD patients with concomitant heart failure, conducted in a clinic during the last one year. Patients were recruited into 2 groups those who were prescribed cardio- selective beta blockers (group 1) and those managed without beta blockers (group 2). Patients were followed for one year. Outcomes measured were the reduction in MRC dyspnea grade and reduction in number of exacerbations in this year as compare to last year. Those patients having renal disease, liver disease, cancer, any Pneumonia leading to hospitalisation, stroke, etc. were excluded from the study.

Results Total of 95 patients (45 in group 1 and 50 in group 2), mean age 61.3±11 years, BMI 27.5±6.8, mean COPD exacerbation rate of 2.45±0.8 were included in the study according to inclusion criteria. There was statistically significant difference in the two groups regarding their smoking history and BMI, though no difference in the gender distribution and mean COPD exacerbation rate in the last year. At the end of one year follow up, we found statistically significant difference in reduction in COPD exacerbation rate and reduction in dyspnea grade with $p<0.05$.

Conclusion Cardio- selective beta blockers when prescribed among sub group of COPD patients who had concomitant heart failure may benefit in terms of reduction in dyspnea grade and reduction in COPD exacerbation rate.

P93 'COPD: CT THORAX – FRIEND OR FOE': CLINICAL UTILITY OF CT THORAX IN DIAGNOSING COMORBIDITIES

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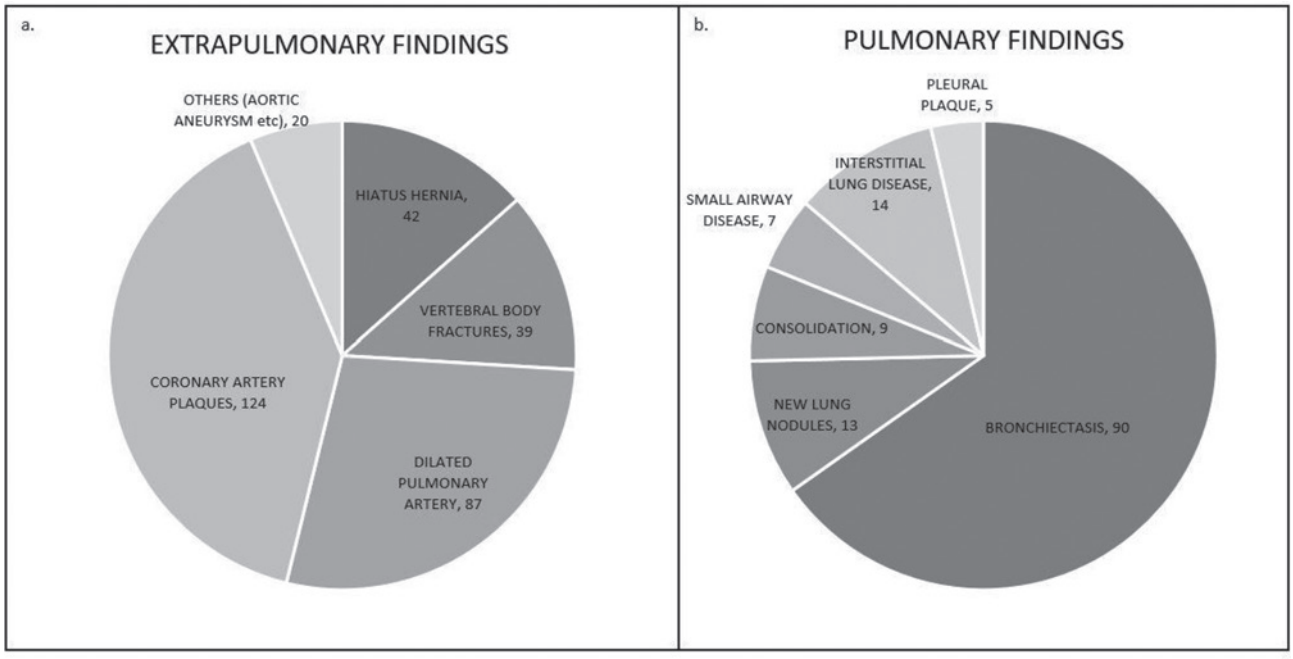
Introduction Chronic obstructive pulmonary disease (COPD) is associated with several pulmonary and extra-pulmonary comorbidities. Comorbidities have a significant impact on health, healthcare services, and mortality in COPD patients, who have, on average,≥4 additional diseases.[1] Earlier detection and treatment will lead to better patient outcomes. This study aims to demonstrate the added value of non-contrast CT Thorax in revealing previously unreported co-morbidities. Our hypothesis is CT Thorax is often requested in COPD patients primarily for co-existing lung disease however extra-pulmonary comorbidities are often under requested and under reported.

Methods

Setting Tertiary cardio thoracic centre

Study design Retrospective review 1000 non-contrast CT thorax scans in COPD patients. Using a pre-formed list of co-morbidities (listed below), images were reviewed by a single operator. Pulmonary bronchiectasis, infection, lung cancer, ILD Extra-pulmonary Coronary artery calcification, Pulmonary artery diameter, hiatus hernia, vertebral fractures.



Abstract P93 Figure 1 Pie charts showing extra pulmonary (a) and pulmonary findings (b) on retrospective analysis of 227 CT scans.

Corresponding Diagnoses Ischaemic heart disease, Pulmonary artery hypertension, Gastroesophageal reflux disease and Osteoporosis

Results 1000 CT chest scans were reviewed. Here is analysis from first 227 scans. Common reasons for requesting imaging: lung transplant assessment (29%), excluding bronchiectasis (18%), acute exacerbation of COPD(12%) and LVRS assessment. Retrospective analysis of 227 CT Thorax scans showed a total of 450 pulmonary (138) and extra pulmonary (312) findings. (figure 1) Pulmonary findings Bronchiectasis: 40% (90/227), lung nodules: 6% (13/227) of which new cancer diagnoses were 23% (3/13), Consolidation 4% (9/227), Small airway changes 3% (7/227), Interstitial lung changes:6% (14/227), Pleural plaques 2% (5/227). Extra pulmonary findings Hiatus hernia: 18.5% (42/227), Vertebral fractures: 17% (39/227), Enlarged Pulmonary artery diameter (more than or equal to 29 mm): 38% (87/227), Coronary artery plaques: 55% (124/227).

Summary Preliminary analysis indicates a high incidence of potentially treatable extra pulmonary comorbidities. Incidence of co-existing radiological bronchiectasis is 40%.

Conclusions To our knowledge this is the first report quantifying the added value of non-contrast CT Thorax in the assessment of COPD patients. Our recommendation is that a list of imaging diagnoses linked to well recognised COPD comorbidities should be part of the standard work up in the assessment of COPD patients undergoing CT Thorax.

REFERENCE

1. Martinez CH, Miguel DJ, Mannino DM. Defining COPD-related comorbidities, 2004–2014. *J COPD F*.2014;1(1):51–63.

P94 CARDIORESPIRATORY PHYSIOLOGY IN PATIENTS WITH COPD ACCORDING TO BLOOD EOSINOPHILIA: DATA FROM THE ERICA COHORT

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Introduction Blood eosinophils level in Chronic Obstructive Pulmonary Disease (COPD) is a candidate biomarker for Regulatory qualification as a drug development tool identifying individuals who may benefit from targeted therapies. Current evidence focused on association with exacerbations and response to therapy, however the association of eosinophilia with cardiorespiratory physiology has not been determined.

Methods The ERICA (Evaluating the Role of Inflammation in Chronic Airway Disease) study is a large multicentre study of patients with COPD.[1] Aortic pulse wave velocity (PWV), carotid intimal thickness (CIMT) and spirometry were measured. Health Status (CAT) was recorded. From the full blood count, both absolute and percentage eosinophil counts were considered. We used previously validated cut offs[2] of 0.3×10^9 cells/L and 2% to compare aortic PWV, CIMT and spirometry variables using a Student's t-test. A multivariate model was then built to examine the effect after adjusting for confounding factors.

Results 519 subjects were included in this analysis. Of these, 58% were men, mean (SD) age of 66.9 (7.6) years with a median smoking history of 42 pack years. Mean (SD) resting heart rate was 75 (13)bpm, mean arterial pressure 104 (12) mmHg and percentage predicted $FEV_1$52.5 (16.1)%. When comparing high and low eosinophil groups at both 0.3×10^9 cells/L and 2% cut-offs there was no difference in smoking status or pack years, spirometry variables or CAT score. There was no difference in prevalence of ischaemic heart disease, stroke or diabetes. Aortic PWV or CIMT were not different between groups. Multiple regression confirmed this (Table).

Conclusions A phenotype defined by blood eosinophilia does not relate to cardiorespiratory physiological variables in subjects with COPD.

REFERENCES

1. Mohan D *et al*. *Journal of COPD* 2015.
2. Negewo N *et al*. *Respirology* 2017.

Abstract P94 Table 1

Cardiorespiratory variables *	Absolute eosinophil count			Percentage eosinophil count		
	Beta co-efficient	95% CI	p-value	Beta co-efficient	95% CI	p-value
Aortic PWV (m/s)	0.23	−1.3 to 1.7	0.77	0.090	−0.29 to 0.47	0.64
CIMT (mm)	0.16	−0.60 to	0.69	0.04	−0.15 to	0.71
Diameter right	0.17	0.91	0.65	0.05	0.23	0.59
Diameter left		−0.56 to 0.89			−0.13 to 0.23	
FEV_1 (L)	0.10	−0.11 to 0.51	0.21	0.06	−0.02 to 0.13	0.15
FVC (L)	0.17	−0.29 to 0.64	0.46	0.12	0.01 to 0.23	0.04

* Adjustment for sex, age, MAP, HR, FEV_1, FVC, smoking pack years, history of diabetes and peripheral vascular disease

P95 CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN SYMPTOMATIC AORTIC STENOSIS: A MAIN UNDERLYING DIAGNOSTIC CONFOUNDER AND PROGNOSTIC FACTOR

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Introduction and Objectives COPD is associated with increased prevalence of cardiovascular comorbidities and mortality from cardiac pathologies. In heart valve diseases, the onset of dyspnoea is the main determinant of outcome and treatment. Thus, COPD may represent a confounding factor in patients with severe aortic stenosis (AS) whilst influencing management. Moreover, the correct diagnosis of COPD in symptomatic AS is extremely challenging. We investigate the prevalence of COPD in patients with symptomatic AS and its relation with all-cause mortality.

Methods Consecutive patients with symptomatic severe AS referred to a cardiology tertiary centre for their clinical management were recruited. The severity of aortic valve disease, diagnosis of COPD and symptomatic status were recorded. Patients were treated with either surgical or percutaneous