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**

Prevalence of extra pulmonary comorbidities and mortality from 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 undergoing CT Thorax. 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).

**REFERENCE**


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**P94**

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

1. Buss, TM; McKeeer, D; Mohan, K; Maki-Petaja, J; Forman, E; McEnery, L; Cheryian, N; Gal, J; Cockcroft, R; Calverley, P; MacInnes, R; Tal-Singer, R; Polkey, J; Wilkinson, B; Bolton, C; University of Nottingham, UK; 2. GSX King of Prussia, US; 3. University of Cambridge, UK; 4. Cardiff University, UK; 5. Liverpool University, UK; 6. Edinburgh University, UK; 7. Royal Brompton Hospital, London, UK

**Introduction**

Blood eosinophils level in Chronic Obstructive Pulmonary Disease (COPD) is a candidate biomarker for Regululatory 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 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 women, 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 FEV1,52.5 (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**


**Abstract P94 Table 1**

<table>
<thead>
<tr>
<th>Cardiorespiratory variables</th>
<th>Absolute eosinophil count</th>
<th>Percentage eosinophil count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta coefficient</td>
<td>95% CI</td>
</tr>
<tr>
<td>Aortic PWV (m/s)</td>
<td>0.23</td>
<td>-1.3 to 0.77</td>
</tr>
<tr>
<td>CIMT (mm)</td>
<td>0.16</td>
<td>-0.60 to 0.69</td>
</tr>
<tr>
<td>Diameter right</td>
<td>0.17</td>
<td>0.91 to 0.65</td>
</tr>
<tr>
<td>Diameter left</td>
<td>-0.56</td>
<td>-1.13 to 0.03</td>
</tr>
<tr>
<td>FEV1 (%)</td>
<td>0.10</td>
<td>-0.11 to 0.21</td>
</tr>
<tr>
<td>FVC (%)</td>
<td>0.17</td>
<td>-0.29 to 0.46</td>
</tr>
</tbody>
</table>

* Adjustment for sex, age, MAP, HR, FEV1, FVC, smoking pack years, history of diabetes and peripheral vascular disease

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**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
DEATH RELATED TO CARDIOVASCULAR DISEASE IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

1JM Fermont, 1AM Wood, 2H Müllerova, 1B Wilkinson. 1University of Cambridge, Cambridge, UK; 2GlaxoSmithKline R&D, Uxbridge, UK

Abstract P95 Figure 1

Chronic obstructive pulmonary disease (COPD) kills over 5.6% (3.2 million) of the world population every year and is projected to increase to 7.8% by 2030. According to the literature about a third of patients with COPD die of cardiovascular disease (CVD). However, these findings do not match the actual prevalence of COPD was even higher (33%). COPD severity in AS based on FEV1 was classified as follows: mild in 46%, moderate in 41%, severe in 12%, and very severe in 1%. There were no differences in terms of aortic disease severity, body habitus, functional class nor cardiac function in patients with or without COPD. AS patients with COPD were more likely to be males (56% vs 43%, p<0.001) and with a non-significant tendency to older age (80±7 vs 78 ±8, p=0.07). Of the AS COPD patients, only 9% were on inhaled treatment. During a mean follow-up of 16±10 months, patients with COPD showed higher rates of all-cause mortality compared to patients without COPD (39% vs. 20%, p<0.001). COPD was an independent predictor of all-cause death (HR: 2.1, 95% CI: 1.4 to 3.2, p<0.001).

Conclusion COPD in symptomatic AS is common, undertreated and associated with an increased risk of death. Spirometry and COPD case-finding should be performed when managing patients with symptomatic AS.