Conclusions RC-time is not constant between health and pulmonary vascular disease. A reduction in RC-time, in the context of PAH, is associated with a decrease in cardiac efficiency. RVOF is lower in the NPH group compared to the PAH group. This implies better cardiac efficiency in the NPH group possibly due to less pulsatile loading of the RV. Haemodynamic assessments which include measures of compliance may be of utility in understanding the progression of right heart failure in PAH.

P172 PULMONARY HYPERTENSION IN IPF: UTILITY OF HRCT

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Purpose To evaluate the reliability of HRCT-parameters suggesting Pulmonary Hypertension (PH) in a population of Idiopathic Pulmonary Fibrosis (IPF) patients with or without PH at right-sided-heart-catheterization.

Methods and materials The HRCT scans of 26 patients with IPF, underwent both right-sided-heart-catheterization and echocardiography, were retrospectively, blindly and independently, evaluated by one radiology resident and one experienced-radiologist (with a 10-years-experience in thoracic-radiology).

The diameter and area of Pulmonary Artery (PA), before its bifurcation, the diameter of ascending aorta and the mid antero-posterior-diameter of the thoracic vertebra, on the same CT-section, and the widest short-axis-diameters of four segmental arteries and bronchus, in both upper and lower lobes, were measured. The diameters of left ventricle and inferior vena cava, the presence of emphysema, pericardial effusion and hiatal hernia were also evaluated.

Results 15 out of 29 patients had PH at RHC. The HRCT parameters related to the mean pulmonary artery pressure (mPAP) were: the PA-area ($R^2=0.238079$; $p = 0.04$), the ratio of the PA-area to the ascending aorta diameter ($R^2=0.215345$; $p = 0.0524$) and above all the ratio of the diameter of segmental artery to the adjacent bronchus in the left upper lobe ($R^2=0.354973$; $p = 0.0006$).

Abstract P172 Figure 1 Linear regression between mean pulmonary artery pressure measured by right heart catheterization (mPAP) and the ratio of the diameter of segmental artery to the adjacent bronchus of the apicoposterior segment of the left upper lobe

The combination of systolic pulmonary artery pressure (sPAP), the PA-area at HRCT and the ratio of the diameter of segmental artery to the adjacent bronchus in the apicoposterior segment of the left upper lobe was strongly correlated to mPAP ($R^2=0.785163$; $p = 0.0001$). The contribution of other echocardiographic-parameters (longitudinal STRAIN and Time-to-Peak STRAIN values, TTP) in multivariate regression analysis was not statistically significant, probably because of the small number of patients.

Using the ROC Analysis we found that 931,6 is the upper limit of normal (ULN) for the PA-area, with a 86% sensitivity and 61% specificity (0.839 AUC); while 20.34 is the ULN for the ratio of the PA-area to the ascending aorta diameter, with a 100% sensitivity and 50% specificity (0.804 AUC).

Conclusion (S) HRCT remains an useful tool to identify patients with PH, however the combination of HRCT and echocardiography improves accuracy in PH diagnosis.

In the pleural zone

P173 AMBULATORY MANAGEMENT OF SPONTANEOUS PNEUMOTHORAX

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Introduction There is no clear consensus on the management of Spontaneous pneumothorax. BTS recommends insertion of chest drain following failure of initial aspiration in large primary spontaneous pneumothorax (PSP) and in all patients with symptomatic/ large secondary spontaneous pneumothorax (SSP). These patients are usually admitted to hospital following chest drain insertion.

Objective To study the feasibility and safety of early discharge of spontaneous pneumothorax patients requiring chest drain on the ambulatory pathway with a Heimlich valve (pneumostat device).

Methods Patients were initially managed as per BTS guidelines. Patients who had a chest drain inserted were admitted until review by the respiratory team. All PSP patients and some SSP patients with good performance status (WHO scale 0–1) were eligible for the ambulatory pathway. Those with continuing air leak are fitted with a Heimlich valve and discharged home. They were reassessed every two days with a CXR on arrival in the ambulatory care unit. The chest drain was removed once the air leak stopped for at least 24 h.

Results 21 episodes of spontaneous pneumothorax in 18 patients (10 PSP and 8 SSP) were treated on the ambulatory pathway between May'13 and June'14. The healthcare usage of patients on ambulatory pathway is listed in the table. The pneumothorax resolved successfully in 82% (17 episodes). There were three recurrences requiring repeat management on the ambulatory pathway. A total of 10 patients were referred to the surgeon including four with continuing air leak and six due to

Abstract P173 Table 1

	Range	Average
Duration in hospital (days)	0–4	1.62
Duration in community (days)	1–12	3.28
Number of reviews	1–4	1.57

Corrections

P172 - withdrawn

G Bettini, MA Mazzei, D Castria, *et al.* P172 Pulmonary hypertension in IPF: utility of HRCT. *Thorax* 2014;69(Suppl 2):A150. doi: 10.1136/thoraxjnl-2014-206260.301

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