85. What is new in the approach to pulmonary fibrosis?

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Preliminary results of the French national prospective cohort on IPF
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Introduction: Owing the absence of published prospective cohorts, the epidemiology and natural history of IPF remains unclear.

Aims: To determine the factors associated with the occurrence of pre-defined evolutive events: slow progression of IPF, acute exacerbation (AE), subacute exacerbation (subAE), pulmonary hypertension (PH) and death.

Methods: Prospective cohort involving all the 24 French University Hospitals. The diagnosis of IPF was based on 2000 ATS/ERS criteria and centrally reviewed.

Results: From 12/2007 to 12/2010, 240 incident cases of IPF (diagnosis <9 months) were included. Data are available for 210 patients (men: 80%; age: 69±10 years; non-smokers: 29%). At inclusion, a history of neoplasia was reported in 13% and at least one cardiovascular disease in 29% (coronaropathy: 18%). BMI was 27.5±4.3 and it was >25 in 68%. A familial form of IPF was noted in 8%. A combined pulmonary fibrosis and emphysema syndrome was seen in 18% and asymetrical IPF in 7%. Baseline FVC was 76±21% and DLCO was 47±17%. On BAL, lymphocytes were ≥30% in 4.1% and eosinophils ≥20% in 2.1%. Surgical lung biopsy was performed in 31%. After a follow-up of 14±9 months (range: 1-36 months) following events were observed: 34 slow progressions, 19 AE, 10 subAE, 9 PH and 46 deaths. Eight patients were transplanted. The incidence of AE was 12% at 1 year. Survival was 80% and 63% at 1 and 2 years. Mortality
was related to respiratory causes in 78% (AE: 37% and end-stage respiratory insufficiency: 26%).

**Conclusion:** Our results confirm the high frequency of overweight and severe co-morbidities in IPF. Despite a relatively low incidence of evolving events, mortality is already high, with AE being the major cause of death.

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**Arterial stiffness and endothelial dysfunction in idiopathic pulmonary fibrosis (IPF)**

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**Background:** Fibrotic lung diseases are associated with an increased prevalence of coronary artery disease and cardiovascular complications [Kizer et al., 2004]. Arterial stiffness and endothelial dysfunction are widely accepted as markers of cardiovascular risk.

**Objectives:** The aim of the present study was to assess aortic stiffness and endothelial dysfunction in patients with IPF and to determine the association of these markers with other clinical and functional parameters.

**Methods:** We enrolled 25 IPF patients (age 57±8 yrs; FVC 80±18%; DLco 38±15%) and 30 normal control subjects (age 52±5 yrs). Assessment of arterial stiffness was performed by use of digital photoplethysmography (Pulse Trace PCA 2, Micro Medical). Change in reflection index of the digital volume pulse in response to salbutamol (∆RISAL) was used to assess endothelial function.

**Results:** In IPF patients stiffness index (SI) was significantly higher than in normal control subjects: 9.8±3.1 vs 6.9±2.1 m/s (p=0.001). The correlations between SI and sleep time spent with SpO2 < 88% (r=0.67, p<0.05) and total serum cholesterol level (r=0.77, p<0.05) were highly significant in IPF patients. ∆RISAL was significantly lower in IPF patients than in control subjects: 2.2±1.2 vs 15.8±9.3% (p<0.01) for ∆RISAL was significantly associated with FEV1 (r=0.57, p<0.05), mean nocturnal SpO2 (r=0.83, p<0.05) and total cholesterol level (r=0.71, p<0.05).

**Conclusions:** Arterial stiffness and endothelial dysfunction are significantly impaired in IPF patients. Decreased FEV1 was associated with endothelial dysfunction. Nocturnal hypoxemia and total cholesterol level have an association with both arterial stiffness and endothelial function.

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**Clinical course of idiopathic pulmonary fibrosis (IPF): Prediction and outcome**

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**Background:** IPF is a progressive disease for which a median survival time of 2.8 years was reported. However the clinical course of IPF is variable. Acute exacerbation (AE) is a major cause of death in IPF, but only a minority of patients develop AE.

**Objectives:** The aim of this study was to examine different clinical courses of IPF and to evaluate associated risk factors and predictors.

**Methods:** We retrospectively studied 85 consecutive patients diagnosed with IPF based on ATS/ERS consensus statement. Clinical data and serial pulmonary function tests were obtained. In accordance to King et al. (King, TE et al. AJRCCM 2011; 183:431-40) patients were grouped to four clinical phenotypes: stable disease, slowly progressive, rapid progressive to death or mixed course. Furthermore, AEs as defined by the criteria of Collard et al. (Collard, HD et al. AJRCCM 2007; 176:636-643) were reported. Serial serum CCL18 concentrations were measured by ELISA.

**Results:** AE occurred in 34 (40%) patients, with multiple episodes in 6 (7%) patients. The 5-yr survival rate of IPF patients with and without AE was 15% and 41%. Baseline CCL18 serum concentrations differed significantly among the four clinical phenotypes (p<0.0001). IPF patients with a rapid progressive or mixed course showed higher CCL18 serum concentrations (p<0.0001), lower FVC predicted (FVC±18%; DLco±21.9), they had better baseline functional tests and similar number of familial IPF cases. There was not statistically significant difference in median survival in the two groups (32 months in CG and 46 months in NCG, p=0.179).

**Conclusions:** We demonstrate that baseline serum CCL18 levels are elevated in IPF patients prone to AE and predict a rapid progressive or mixed course of IPF.

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**Risk factors of acute exacerbation of idiopathic pulmonary fibrosis-extended analysis of the pirfenidone trial in Japan**

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**Background:** Although acute exacerbation (AE) of idiopathic pulmonary fibrosis (IPF) is a well known clinical condition, predicting risk factors remain unknown. Recent studies reported that various baseline factors, and at least 10% decline in FVC at six months were reported as risk factor for AE [Sarcoidosis Vasc Diffuse Lung Dis 2010;27:103-110]. We sought to evaluate the risk factors of AE by analyzing our phase III clinical trial of pirfenidone for patients with IPF (n=275) (Eur Respir J 2010; 35: 821-9).

**Methods:** Baseline characteristics including age, sex, smoking, BMI, dyspnea grade (Hugh-Jones classification), AaDO2, PaO2/√V̇E, DLco, KL-6, SP-A, SP-D were evaluated as possible risk factors for AE. Decline of VC≥10% within 6 months was also evaluated. In addition, effect of pirfenidone therapy was also evaluated.

**Results:** During 52 weeks, 14 patients experienced AE-IPF. Univariate analysis by Cox proportion hazards model were as follows: age (HR, 0.982, p=0.642), sex (HR, 1.505, p=0.489) smoking (HR, 0.464, p=0.168), BMI (HR, 0.935, p=0.460), dyspnea grade (HR, 1.763, p=0.168), AaDO2 (HR, 1.047, p=0.069), PaO2 (HR, 0.955, p=0.110), √V̇E (HR, 0.971, p=0.078), DLco (HR, 0.984, p=0.714), KL-6 (HR, 1.000, p=0.698), SP-A (HR, 0.980, p=0.776), SP-D (HR, 1.000, p=0.875), pirfenidone treatment (HR, 1.211, p=0.732). Decline of VC was a significant risk factor for AE-IPF (HR, 3.780, p=0.014). Stepwise multivariate analysis revealed that initial AaDO2 (HR, 1.055, p=0.045) and decline in VC within 6 months (HR, 1.951, p=0.012) were significant risk factors for AE-IPF.

**Conclusions:** Baseline higher AaDO2 and decline of VC≥10% within 6 months are significant risk factors of AE-IPF.

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**Clinical profile of idiopathic pulmonary fibrosis with lung cancer**

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**Background:** The association of lung cancer (LC) and idiopathic pulmonary fibrosis (IPF) is well recognized. The poor prognosis of both conditions and the risk of serious complications related to LC treatment make the clinical management particularly difficult.

**Aims:** To describe the clinical profile and survival of IPF associated or not with LC.

**Methods:** Retrospective cohort study from data collected in a prospective manner and retrieved from the IPF registry of Pulmonology Unit (Morgagni Hospital, Forlì, Italy). Study period from January 2000 to December 2010.

**Results:** 208 patients diagnosed with IPF according to ATS/ERS criteria and followed in our IPF Clinic. Nineteen (9.1%) patients developed LC (cancer group, CG). Compared to patients without LC (non-cancer group, NCG), CG were older (65±8.7 v 63±8.9 yrs), more frequently smokers (79.5% vs 67.8%) and heavier smokers (p<0.05), they had better baseline functional tests and similar number of familial IPF cases. There was not a statistically significant difference in median survival in the two groups (32 months in CG and 46 months in NCG, p=0.179).

**Conclusions:** Cigarette smoke was the only clinical variable associated with increased risk of developing LC in IPF patients. We did not observe any difference in incidence of LC when comparing familial and sporadic forms of IPF. Survival did not differ despite better functional tests at baseline in the CG.
P651  
**Effects of nitric oxide synthase up-regulation in early remodeling of usual interstitial pneumonia has impact on long term outcome of patients**  
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Recently, impaired endothelial-dependent vascular tone suggest that NOS enzymatic activity, as well as vascular NO synthesis and release, may decrease or increase depending on early or late pulmonary remodeling process. In this study, we validated the importance of the expression of NOS isoforms (neuronal [nNOS], inducible [iNOS], and endothelial [eNOS]) protein and studied the relationships between NOS isoforms in early and late remodeling of usual interstitial pneumonia (UIP).

**Material and methods:** We determined density of endothelial, muscular, myofibroblasts and alveolar cells expressing NOS in surgical lung biopsies from 25 patients with UIP. We used immunohistochemistry and histomorphometry to evaluate the amount of endothelial, muscular, myofibroblasts and alveolar cell staining for NOS.

**Results:** Unaffected areas of UIP had increased eNOS and iNOS expression, whereas a significant increase of iNOS expression was found in unaffected and vascular areas. Kaplan–Meier analysis for nNOS and eNOS dichotomized percentiles revealed a statistically significant prolonged survival for patients in the low risk group (estimated median survival 71.73 vs. 33.36 and 55.56 vs. 9.87 months for the high risk group, log rank p<0.01).

**Conclusions:** We conclude that these differences in the frequency and distribution of lung cells expressing NOS isoforms in early remodeling may represent adaptive changes that contribute both to the vasodilatation of distal segments as new muscle develops in the UIP lung and consequent of alveolar surface stress from the effects of UIP on lung tissue.

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**Imbalance between circulating endothelial cells and endothelial progenitors in idiopathic pulmonary fibrosis**  
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**Background:** Fibrogenesis during idiopathic pulmonary fibrosis (IPF) is associated with abnormal vascular remodeling. Respective abundance of circulating endothelial cells (CEC) and endothelial progenitor cells (EPC) might reflect the balance between vascular injury and repair and potentially serve as a biomarker of the disease.

**Objectives:** We postulated that CEC and all EPC subtypes might be differently modulated in IPF. We aimed at 1) assessing them in early stages of IPF and 2) searching for correlations with disease severity.

**Methods:** 64 consecutive patients with newly diagnosed IPF and 10 healthy age-matched volunteers were studied. CEC were isolated with CD146-coated beads. CD34, CD133 and KDR antigens, characterizing EPC, were assessed through flow cytometry. EPC (early CFU-Hill and late endothelial cells forming colonies (ECFC)) were also counted using cell culture.

**Results:** CEC numbers were significantly increased in IPF (p=0.004) whereas EPC assessed using both flow cytometry (CD34+KDR+) and cell culture were decreased vs controls (p<0.05). CEC did not differ according to disease severity (DLCO > or < 40% Hb) nor did CD34+KDR+ cells. In contrast, progenitors obtained in culture were markedly increased in the most severe vs the least severe IPF subgroup (p=0.04 and p=0.01 for CFU-Hill and ECFC, respectively, for DLCO <40% vs >40%). ECFC was the only cell type found to be correlated to DLCO (Spearman correlation test, p=0.04).

**Conclusion:** IPF is associated with markers of vascular injury and with a global decrease in EPC. Disease severity is associated with an EPC mobilization whose mechanisms and clinical impact need to be explored.

P653  
**Leptin and adiponectin levels in idiopathic pulmonary fibrosis**  
P653 mechanisms and clinical impact need to be explored.

P654  
**HRCT score to control and evaluate the prognosis in idiopathic pulmonary fibrosis**  
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**Introduction:** HRCT is not commonly used to assess the severity of idiopathic pulmonary fibrosis (IPF). To assess: We sought to evaluate the usefulness of a semiquantitative HRCT score and its relation with respiratory function tests normally used to ascertain IPF severity and to monitor the evolution and progression of the fibrotic process.

**Patients and methods:** A prospective 4 years study including 36 consecutive IPF patients. A semiquantitative score was used to score every predefined IPF pattern on HRCT. As a result of summing up all of them we had the Total Score of Fibrosis for each patient.

**Results:** We studied its relation with functional respiratory tests, bronchoalveolar lavage (BAL) cellularity and analyzed the differences found among the death patients.

**Conclusions:** We found a significant correlation between the honeycomb score and %DLCO (r=–0.48, p=0.004), total score of fibrosis with %FEV1 (r=–0.41, p=0.011), %DLCO (r=–0.41, p=0.01 and) and TLC (r=–0.36, p=0.03). The 6-minutes walking test (6MWT): the final SaO2 correlated with the total score (r=–0.48, p=0.04). A-aO2grad also correlated with the honeycomb score (r=0.43, p=0.01) and the total score (r=0.48, p=0.005). Dead patients had a higher total score and a tendency of higher neutrophilia in BAL (p=0.059).

**Conclusions:** A semiquantitative score of HRCT is useful in assessing the initial severity of IPF and should be able to predict its development.

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**Daily hand-held spirometry for the monitoring of patients with idiopathic pulmonary fibrosis**  
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**Introduction:** Idiopathic pulmonary fibrosis (IPF) is an invariably fatal condition characterised by a variable course; prolonged periods of apparent disease stability are often interspersed by dramatic and often cryptogenic acute deteriorations. These acute exacerbations are a significant cause of morbidity and mortality in IPF. For lung transplant recipients, daily hand held spirometry has been shown to be an effective means of detecting acute rejection episodes. This exploratory study aims to determine the utility of daily hand held spirometry in IPF.

**Methods:** Patients with IPF were recruited from amongst new referrals to our unit. Baseline severity was assessed by FVC, DLco and 6 minute walk. Patients were given a hand held spirometer (Carefusion, UK) and provided with instruction on how to self-administer spirometry. Patients were asked to record daily FEV1 and FVC values.

**Results:** To date, 19 subjects have been recruited; 17 male, age 66±5.7 years (mean± SD). Overall the subjects have moderate to severe disease with FVC 74.2±21.8% predicted, DLco 40.6±13.5% predicted and 6 minute walk distance 525±120m. For subjects thus far completing over 4 weeks of diary monitoring (n=9), mean hand held FVC correlates well with formal clinic spirometry (r=0.82).
Methods: Thirty-five patients with IPF according to the ATS/EERS criteria underwent spirometry, O2 saturation, 6-min walking distance (6-MWD) and radiographic evaluation of fibrosis (HRCT score). The independent contributors of these dependent variables were selected by using stepwise multiple regression analysis. The Kaplan-Meier method was used to produce estimates and plots for the patient cohort. Survival time was calculated as the number of months from the patients’ initial visits until their death or time of censoring. Patients were censored if they were still alive at the last contact.

Results: From 35 consecutive patients with IPF (18 men and 17 women, mean age 53.5±13.2 yrs) 12 patients (34.3%) died during the study despite standard treatment. The mean survival was 11.7±12.6 months. The subgroup of patients with IPF with resting O2 saturation ≤88%, FVC ≤50%, 6-MWD ≤350 m, fibrosis score ≥10 has a bad prognosis and high death rate.

Conclusions: IPF prognostic markers allow identifying subgroups with different clinical evolution, providing prognostic information to patients and to improve the selection of the most appropriate patients for novel therapeutic interventions.

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The prognostic significance of cardiopulmonary exercise testing in IPF
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Background: In idiopathic Pulmonary Fibrosis parenchymal lung damage leads to defects in mechanics and gas exchange, manifesting with progressive dyspnea and exercise limitation. Since IPF carries a poor prognosis, early and reliable prediction of survival is of significant value to the clinician. The role of maximal exercise data in prognostic evaluation of IPF patients is uncertain.

Aims and objectives: The aim of the present study was to evaluate the prognostic significance of cardiopulmonary exercise test (CPET) in this group of patients.

Methods: Twenty five IPF patients were prospectively recruited and underwent functional evaluation through maximal (CPET) and submaximal exercise testing (6 minute walk test- 6MWT) at diagnosis. Patients were followed up regularly; epidemiologic and survival data were gathered.

Correlations between survival and parameters of maximal and submaximal exercise were calculated.

Results: Mean survival was 44.4 months.

Statistically significant correlations were found between survival and CPET parameters: VO2peak (p<0.02, RR=0.99), VO2peak/kg (p=0.01, RR=0.87), VE/VCO2slope (p=0.005, RR=0.91), VE/VCO2AT (p<0.001, RR=1.14) and the 6MWT parameters: distance walked (p<0.001, RR=0.99) and desaturation (p<0.01, RR=1.42).

Conclusions: Physiological parameters obtained during maximal and submaximal exercise testing reflect survival in IPF population.

P660
Proposal for revised classification of disease severity of idiopathic pulmonary fibrosis in Japan
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Background: IPF is a progressive, debilitating, and life-threatening lung disease. The classification of IPF severity is not well established but is important for patient management. In Japan, IPF has been classified as mild, moderate, or severe according to the 2015 guidelines of the Japan Respiratory Society. However, the ability to predict mortality is limited by the presence of confounding factors including age, gender, and physician's influence.

Aims and objectives: To provide a detailed description of IPF patients in Japan and to propose a new classification based on severity.

Methods: This is a descriptive study of patients with IPF in Japan. A total of 355 patients with IPF were included in the analysis. The severity of IPF was assessed using the IPF-10 score and the 2015 guidelines of the Japan Respiratory Society. The patients were divided into three groups: mild, moderate, and severe.

Results: The mean age of the patients was 53.3 years (range: 24-85 years). The male-to-female ratio was 1.6:1. The mean IPF-10 score was 10.3 (range: 0-20). The distribution of severity was as follows: mild (n=216, 60.6%), moderate (n=122, 34.3%), and severe (n=17, 4.9%). The Kaplan-Meier survival curves showed that severe patients had a significantly shorter survival time than mild and moderate patients (p<0.05).

Conclusions: The proposed classification of IPF severity based on the IPF-10 score and the 2015 guidelines of the Japan Respiratory Society provides a more detailed and accurate description of IPF patients in Japan. This classification can be used to predict mortality and guide patient management.
The patients whose PaO2 is ≥ 60 torr during 6MWT is less than 90%, then the severity should be increased by one stage. We hypothesized that patients whose PaO2 is > 80 torr with desaturation (classified as stage I in present) might have poor prognosis.

Methods: Two hundred fifteen patients with IPF in 10 centers performing 6MWT routinely were studied by using a questionnaire survey.

Results: The proportion of present stage I was 47.9%, and among them, 51.5% patients showed desaturation during 6MWT. The median survival time (MST) of stage I with and without desaturation were 50.5±1.9 mo. and 99.3±3.5 mo. respectively (p=0.0033). In revised severity stages of patients with IPF, MST of stage I (n=44), stage II (n=77), stage III (n=50), and stage IV (n=44) were 99.3±3.5 mo., 52.0±2.7 mo., 35.0±8.7 mo., and 22.9±4.3 mo. respectively. New survival curves between the each stage have been adequately separated.

Conclusion: The patients whose PaO2 is > 80 torr at rest with desaturation during 6MWT should be classified as stage II in revised classification of disease severity in IPF.

This work was supported in part by a grant-in-aid for interstitial lung diseases from the Japanese Ministry of Health, Labor and Welfare.

P661 Therapeutic effect of combination of salvia and ligustazone on bleomycin induced pulmonary fibrosis
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This work was supported by Sichuan Youth Science and Technology Foundation (No. 2009-04-395 to Xianming Fan).

Background: Current agents for the treatment of idiopathic pulmonary fibrosis (IPF) have not been found to improve the prognosis, thus requiring the development of new types of drugs to treat IPF.

Aims: This study was designed to investigate the effect of combination of Salvia (one kind of traditional Chinese medicine) and Ligustazone (one kind of traditional Chinese medicine) on the expression of inflammatory mediators, the mRNA expression of type I and III collagen, and hydroxyproline content in lung tissues in bleomycin (BLM)-induced rat pulmonary fibrosis

Methods: Adult Wistar rats were intratracheally instilled with BLM or normal saline (NS). After intratracheal administration, the animals were intraperitoneally injected with combination of Salvia and Ligustazone or NS every day. Then they were sacrificed. HE and Masson staining were used to observe alveolitis and fibrosis. Immunohistochemistry analysis was used to examine the expressions of inflammatory mediators in lung tissues, and the mRNA expression of type I and III collagen and hydroxyproline content in lung tissues was also measured.

Results: Combination of Salvia and Ligustazone could alleviate alveolitis and fibrosis; could attenuate the expression of inflammatory mediators in lung tissues; and could also decrease the mRNA expression of type I and III collagen and hydroxyproline content in lung tissue in rat pulmonary fibrosis.

Conclusions: Combination of Salvia and Ligustazone had an anti-fibrosis effect, and it might be considered as a clinically viable option to treat pulmonary fibrosis.

P662 Promising effect of PMX-DHP absorption therapy for acute exacerbation of IPF
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This work was supported by Sichuan Youth Science and Technology Foundation (No. 2009-04-395 to Xianming Fan).

Background: Although current agents for IPF usually have pulmonary fibrosis, patients with IPF (one kind of traditional Chinese medicine) and Ligustazone (one kind of traditional Chinese medicine) on the expression of inflammatory mediators, the mRNA expression of type I and III collagen, and hydroxyproline content in lung tissues in bleomycin (BLM)-induced rat pulmonary fibrosis have not been found to improve the prognosis, thus requiring the development of new types of drugs to treat IPF.

Aims: This study was designed to investigate the effect of combination of Salvia (one kind of traditional Chinese medicine) and Ligustazone (one kind of traditional Chinese medicine) on the expression of inflammatory mediators, the mRNA expression of type I and III collagen, and hydroxyproline content in lung tissues in bleomycin (BLM)-induced rat pulmonary fibrosis

Methods: Adult Wistar rats were intratracheally instilled with BLM or normal saline (NS). After intratracheal administration, the animals were intraperitoneally injected with combination of Salvia and Ligustazone or NS every day. Then they were sacrificed. HE and Masson staining were used to observe alveolitis and fibrosis. Immunohistochemistry analysis was used to examine the expressions of inflammatory mediators in lung tissues, and the mRNA expression of type I and III collagen and hydroxyproline content in lung tissues was also measured.

Results: Combination of Salvia and Ligustazone could alleviate alveolitis and fibrosis; could attenuate the expression of inflammatory mediators in lung tissues; and could also decrease the mRNA expression of type I and III collagen and hydroxyproline content in lung tissue in rat pulmonary fibrosis.

Conclusions: Combination of Salvia and Ligustazone had an anti-fibrosis effect, and it might be considered as a clinically viable option to treat pulmonary fibrosis.

P663 Effect of bosentan on MMP-7 levels as add-on therapy in idiopathic pulmonary fibrosis. A prospective study
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Idiopathic pulmonary fibrosis (IPF) is a progressive, fatal lung disease lacking effective treatment. Endothelin receptor antagonists were shown to have possible beneficial effects in early stages of IPF. Recent evidence suggests that increased MMP-7 levels may be indicative of disease progression.

Objectives: To determine the effects of bosentan on MMP-7 serum levels in patients with IPF.

Methods: We prospectively studied eleven IPF patients, nine males and two females aged 68.8±6.8 years. Five were current or ex-smokers (45±3.3 packyears), three non-smokers. All patients received oral bosentan 62.5 mg twice daily for 4 weeks, increased to 125 mg twice daily thereafter, for 6 months or longer, as add-on therapy to 10mg prednisolone, acetylsalicylic acid (600 mg tid) and Azathioprine (150 mg/d). Serum MMP-7 levels were measured using commercial ELISA kits. All the patients had routine laboratories, PFTs and radiological (HRCT) tests, 6-minute walking distance (6MWD) and alveolar-arterial gradient of oxygen tension (PA-aO2) were used to observe arterioles and fibrosis.

Results: Serum MMP-7 levels did not show any significant change from baseline (4.6±4.3 pg/ml) to three (7.39±4.77 pg/ml) and 6 months (7.61±4.76 pg/ml). There were no significant alterations in FVC, DLCO, 6MWD and PA-aO2, pre- and post-treatment. No cases of clinically significant infection, leucopenia, elevated liver enzymes or other unexpected adverse events were reported.

Conclusions: The above data suggest that bosentan as an add-on agent to standard therapy is a safe therapeutic modality which results in disease stabilization as assessed by serum MMP-7 and functional status.

P664 Tolerance of pirfenidone in Indian patients with idiopathic pulmonary fibrosis – Usual intermittent pneumonitis: An initial experience
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Aim: Pirfenidone has been recently approved for idiopathic pulmonary fibrosis- usual intermittent pneumonitis (IPF-UIP) in Japan & India. To the best of our knowledge, Indian data is not available. Reported side effects include photosensitivity, skin rash & gastrointestinal upset. We present our initial experience with tolerability of Pirfenidone in IPF-UIP.

Methods: 15 patients (mean age 62 yrs, Male: 11) with clinical-radiological diagnosis of IPF-UIP were included. Baseline liver function, SpO2 & 2-D Echo were performed. Lung function tests & six minute walk tests were possible in 10 patients. Follow up oximetry & liver function tests were performed in all patients. Pirfenidone was started at 200 mg three times a day. Dose was increased to 400 mg three times a day 2 after 2 to 4 weeks. Patients also received prednisolone 10 mg/day, n-acetyl cysteine 600 mg three times a day & PPI.

Results: At baseline mean SpO2 was 92.5%, mean FVC 1.42 Liters. Liver enzyme & bilirubin were normal. 8 patients had pulmonary hypertension on 2-D Echo. There was no significant increase in the liver enzymes at four weeks follow up. 4 patients were initiated on pirfenidone at diagnosis. Rest of patients were diagnosed with IPF-UIP at mean 27.6 months prior to initiating pirfenidone. Mean duration of follow up since starting pirfenidone was 52 days. 2 patients complained of nausea & 1 patient had loose motion. 2 patients skin itching, however, there was no discoloration. These patients were counseled about the adverse event, but preferred to continue the medication.

Conclusion: At short term follow up, pirfenidone appears to be well tolerated in Indian patients with IPF-UIP.
Correlations of quantitative HRCT score in idiopathic pulmonary fibrosis (IPF)
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The aim of the study was to evaluate the usefulness of visual HRCT-score (fibrosis score, ground-glass score) in the assessment of the disease extent.

Methods: Thin-section (10 mm) images were obtained and scored prospectively in 35 consecutive patients (18 men and 17 women, mean age 53.5 ± 13.2 yrs) with newly diagnosed IPF. Each patient’s lobe was scored on a scale of 0-5 for both ground-glass attenuation and fibrosis. The correlations among FVC (% pred.), FEV1 (% pred.), MRC dyspnea score, modified Borg dyspnea score, O2 saturation, 6-MWD and HRCT scores (fibrosis and ground-glass) were studied (Pearson correlation coefficient).

Results: The mean value of the fibrosis score was 11.9 ± 5.2 and of the ground-glass score was 13.8 ± 5.6. Fibrosis score significantly correlated to FVC (r = -0.33, p = 0.04), MRC (r = 0.39, p = 0.02), 6-MWD (r = -0.53, p = 0.001), Borg dyspnea score after 6-MWT (r = -0.4, p = 0.01), O2 saturation (r = -0.33, p = 0.04). Ground-glass score didn’t correlate to any of analysed variables.

Conclusions: In IPF there is a good correlation of functional tests, dyspnea scores, exercise capacity to the HRCT fibrosis score, the best correlation was found with 6-MWD. The correlations of HRCT fibrosis score emphasize the importance of radiographic evaluation in the diagnosis and follow-up of IPF.