"CLINICAL DIAGNOSIS OF HYPERSENSITIVITY PNEUMONITIS"

The probability of hypersensitivity pneumonitis ranged from 0% in patients with none of these features to 98% in patients with all six

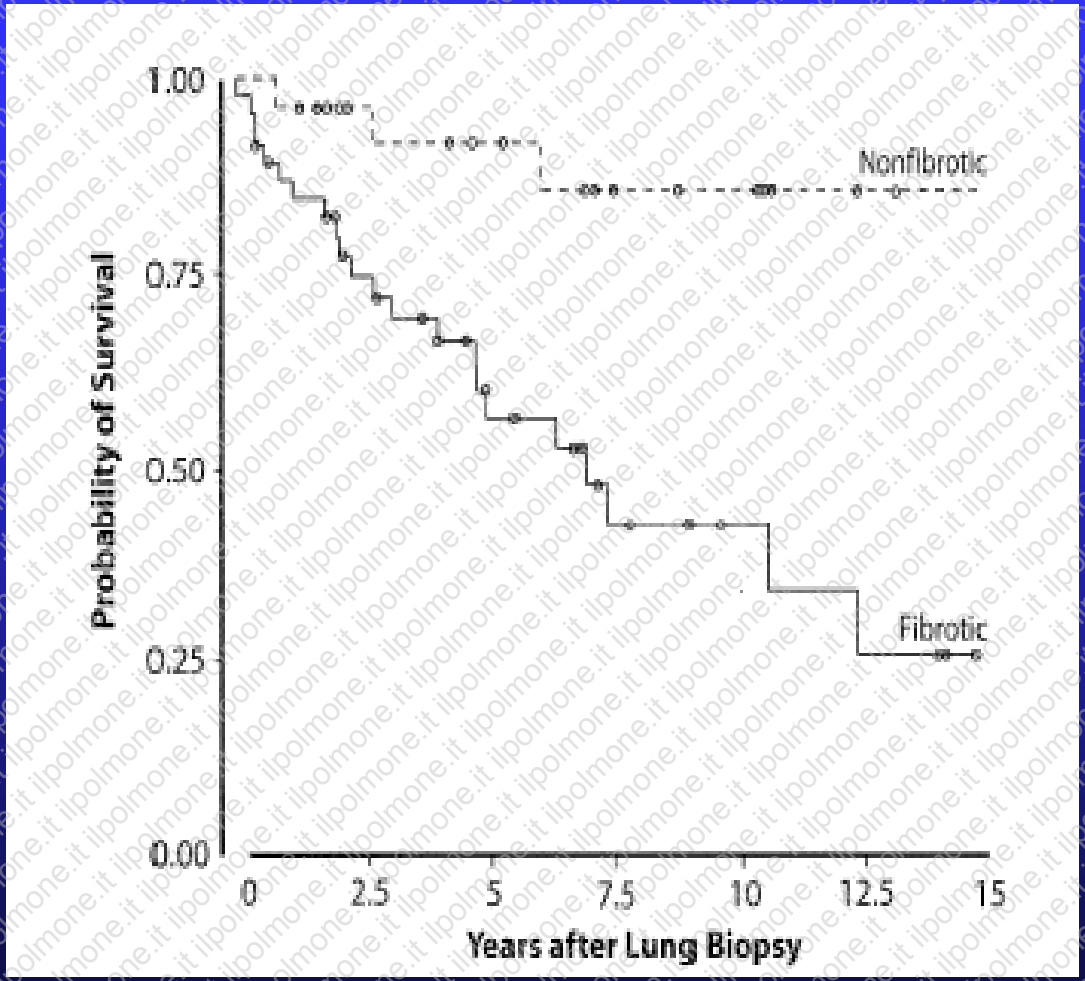
Lacasse Y et al. *Am J Respir Crit Care Med* 2003; 168:952

DIFFERENTIAL DIAGNOSIS

- Viral or bacterial pneumonia
- UIP and NSIP (fibrotic pattern)
- Collagen vascular disease with pulmonary involvement
- Organic dust toxic syndrome (or pulmonary mycotoxicosis)
- Eosinophilic pneumonia
- Allergic bronchopulmonary aspergillosis

The effect of pulmonary fibrosis on survival in patients with hypersensitivity pneumonitis

Vourlekis JS et al. AJM 2004;116:662



Conclusion: Fibrosis was the best predictor of diminished survival of the variables tested, including symptom duration, antigen type, smoking status, and pulmonary function

Prognosis

Authors	N°	UIP Like	Fibrotic NSIP like	Cellular NSIP like	Granu lomas	Giant Cells
Vourlekis J et al AJM 2002;112:490	6	1 (17%)	3 (50%)	2 (33%)	0	1
Ohtani Y et al Thorax 2005;60:665	24	11 (46%)	8 (33%)	5 (21%)	5	19
Churg A et al AJSP 2006;30:201	13	9 (69%)	4 (31%)	-	7	11
Total	43	21 49%	15 35%	7 16%	12 28%	31 72%

Prognosis

43 Patients

21 UIP-like 15 fib. NSIP-like 7 cell. NSIP-like

Follow up in 34 Patients

12 (35%) Died

7 (20%) Stable

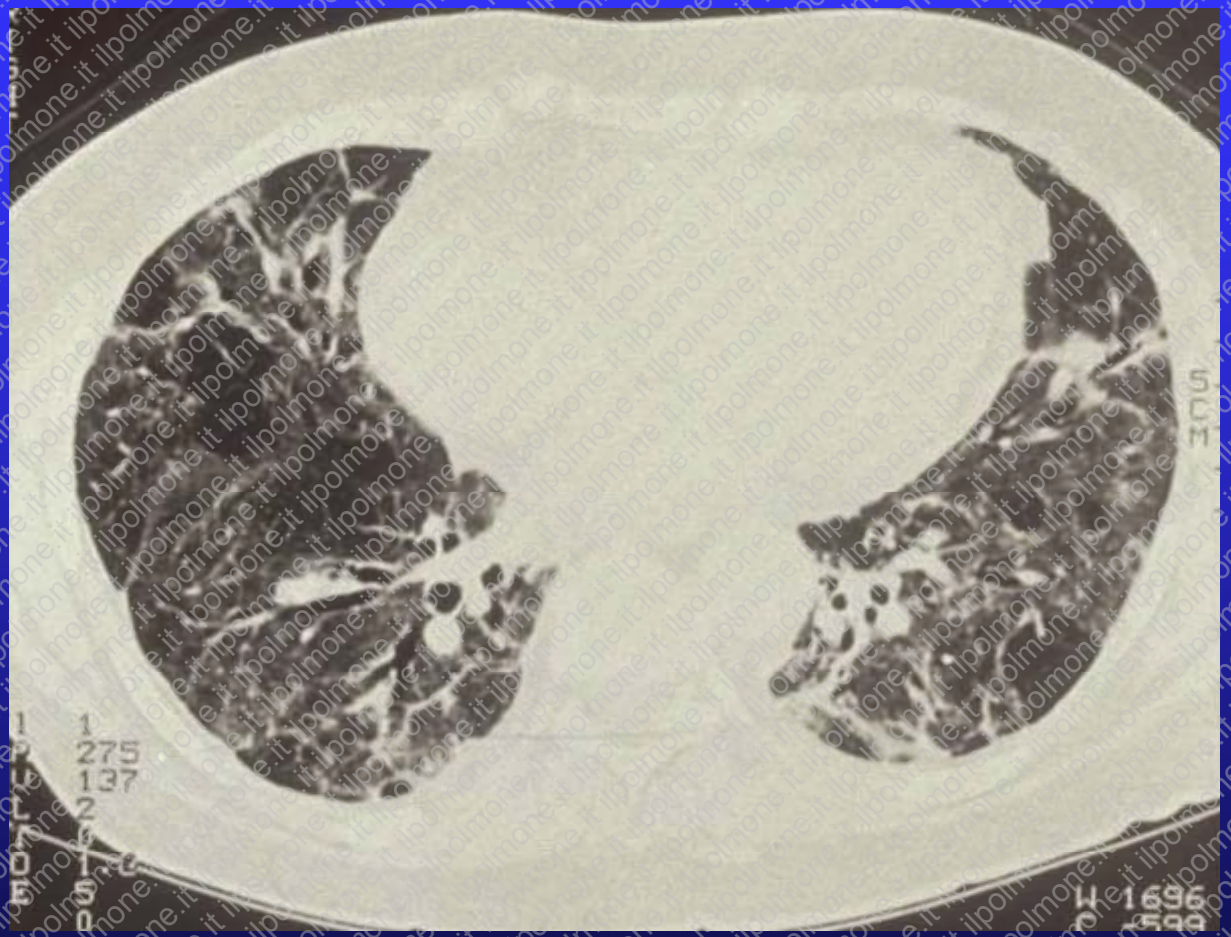
15 (45%) Improved

3.3 years

Vourlekis J et al. AJM 2002;112:490
Ohtani Y et al. Thorax 2005;60:665
Churg A et al. AJSP 2006;30:201

Long-term Risk of Emphysema in Patients with Farmer's Lung and Matched Control Farmers

Pekkanen R et al. Am J Respir Crit Care Med 1998;158:662



Conclusion: the largest difference between the study groups was observed in emphysema. An average of 14 yr after the diagnosis of FL, the HRCT examination revealed that 23% of the FL patients had emphysema compared with only 7% of the control farmers. Quite surprisingly, no significant difference was noted in the prevalence of fibrosis

TREATMENT

- Antigen exposure avoidance
- Corticosteroids
  - Prednisone 0.5-1 mg/kg/day followed by a gradual reduction until a mantainance dose of 10 to 15 mg/day ?
  - Inhaled steroids?
- Antifibrotic drugs for chronic cases?
- Variable prognosis

Therapeutic effects for hypersensitivity pneumonitis induced by Japanese mushroom (Bunashimeji)

Tsushima K et al. Am J Ind Med. 2006;49:826

CONCLUSIONS:

Complete cessation was the best treatment for hypersensitivity pneumonitis. The use of a mask was ineffective for patients with a high serum KL-6 and SP-D concentration and severe ground-glass opacity on chest HRCT. Initial treatment with steroids is recommended for these patients with high levels of total cell counts in BAL fluid

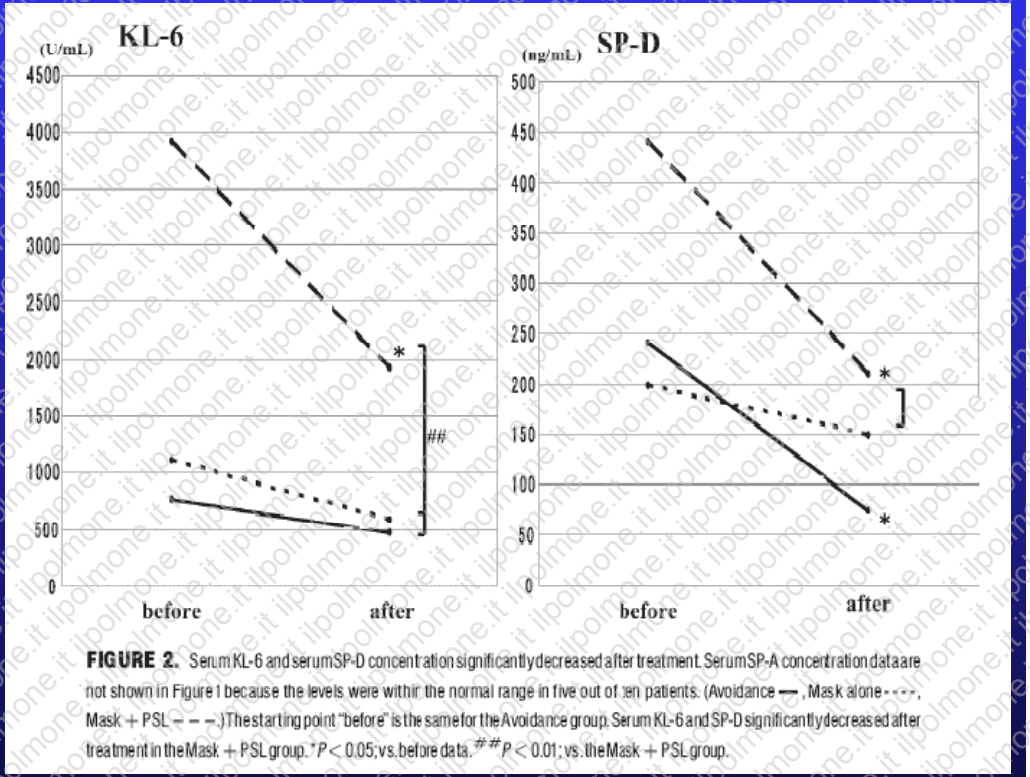


FIGURE 2. Serum KL-6 and serum SP-D concentration significantly decreased after treatment. Serum SP-A concentration data are not shown in Figure 1 because the levels were within the normal range in five out of ten patients. (Avoidance —, Mask alone - - - -, Mask + PSL — — —.) The starting point "before" is the same for the Avoidance group. Serum KL-6 and SP-D significantly decreased after treatment in the Mask + PSL group. $^{*}P < 0.05$; vs. before data. $^{\#\#}P < 0.01$; vs. the Mask + PSL group.

ALTERNATIVE TREATMENT ?

Carlsen KH et al. Allergic alveolitis in a 12-year-old boy: treatment with budenoside nebulizing solution. Pediatr Pulmonol 1992;12:257

Blanchet MR et al. Inhibitory effect of nicotine on experimental hypersensitivity pneumonitis in vivo and in vitro. Am J Respir Crit Care Med 2004;169:903.

Ye Q et al. Thalidomide reduces IL-18, IL-8 and TNF-alpha release from alveolar macrophages in interstitial lung disease. Eur Respir J 2006;28:824

Long-term outcome of pulmonary function in farmer's lung: a 14 year follow-up with matched controls

Pekkanen R et al. Eur Respir J 1997;10:2046

Table 2. – Spirometry and pulmonary transfer factor in farmer's lung (FL) patients and control farmers

	FL patients (n=89)	Control farmers (n=84)	p-value*
VC L	3.45±0.86	3.48±0.84	0.53
% pred	102±14	100±14	
FEV_1 L	2.46±0.64	2.55±0.67	0.60
% pred	93±14	94±15	
FEV_1/VC %	72±7	73±7	0.12
% pred	91±8	94±9	
MEF_{50} $L \cdot s^{-1}$	2.71±1.16	3.06±1.25	0.08
% pred	70±26	77±27	
$T_{L,CO}$ $mmol \cdot min^{-1} \cdot kPa^{-1}$	7.46±1.98	8.61±1.89	<0.001
% pred‡	98±19	110±16	

Table 3. – Spirometry and pulmonary transfer factor in farmer's lung (FL) patients with a single episode of the disease and in patients with one or more recurrences

	Single episode	Recurrent episode(s)	p-value*
Patients n	53	36	
Sex M/F	15/38	5/31	
Age yrs	60±9	60±8	
Nonsmokers n	43	30	
Smokers† n	10	6	
VC L	3.57±0.94	3.27±0.70	0.67
% pred	102±13	102±16	
FEV_1 L	2.54±0.73	2.35±0.48	0.75
% pred	92±14	94±15	
MEF_{50} $L \cdot s^{-1}$	2.73±1.32	2.69±0.90	0.31
% pred	68±28	72±24	
$T_{L,CO}$‡ $mmol \cdot min^{-1} \cdot kPa^{-1}$	7.95±2.01	6.71±1.70	0.02
% pred	102±18	90±18	

- Conclusion: impairment of the pulmonary transfer factor is the most important long-term consequence of farmer's lung. After a single episode the difference was of the order of 10% and after two or more episodes it had increased to about 20%

Table 3 Clinical characteristics and histological pattern in patients with chronic bird fancier's lung (BFL)

	Group A: BOOP-like or cellular NSIP-like lesions (N=7)	Group B: fibrotic NSIP-like lesions (N=8)	Group C: UIP-like lesions (N=11)
Age (years)	56.9 (4.3)	58.4 (1.8)	64.7 (2.1)
Cases of recurrent acute episodes (%)	85.7‡	50.0§	0.0‡ §
Exertional dyspnoea (%)	85.7	100.0	90.9
Duration of symptoms before surgical lung biopsy (months)	19.3 (7.5)	46.3 (14.2)	24.2 (5.3)
Exposure periods (years)	11.6 (2.8)	18.0 (2.8)	11.0 (2.5)
Finger clubbing (%)	0.0‡	50.0	81.8‡
Anti-PDE or BDE antibodies (%)	85.7†	62.5	18.2†
Antigen induced lymphocyte proliferation (%)	100.0	87.5	90.9
VC (% pred)	80.2 (9.1)	60.6 (5.3)	74.8 (7.2)
TLCO (% pred)	58.7 (5.8)	49.1 (6.0)	52.3 (5.7)
Micronodules on HRCT (%)	57.1†	25.0	0.0†
Traction bronchiectasis on HRCT (%)	28.6** ‡	100.0**	100.0‡
Honeycombing on HRCT (%)	0.0‡	50.0	90.9‡
BAL lymphocytes (%)	77.0 (2.6)** ‡	40.8 (8.6)** §	13.1 (2.9)‡ §
Favourable response to treatment (%)*	7/7 (100.0%)** ‡	1/7 (14.3%)**	1/9 (11.1%)‡
No response to treatment (%)*	0/7 (0.0%)† ††	5/7 (71.4%)††	6/9 (66.7%)†
Alive/dead	7/0	4/4	5/6