



Hypersensitivity Pneumonitis: Update on Treatment Approaches

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Disclosures

- Speaking and consulting fees from Boehringer Ingelheim, Genentech,
 Vicore
- Research trials with Boehringer, Genentech, Galapagos, Hoffmann-La Roche, Nitto Denko
- Authorship fees from UpToDate, Dynamed
- Medical Advisory Board: The Myositis Association





The exposure history is critical but difficult to obtain

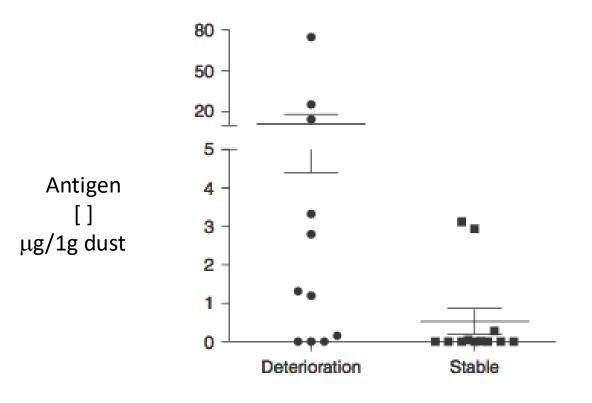


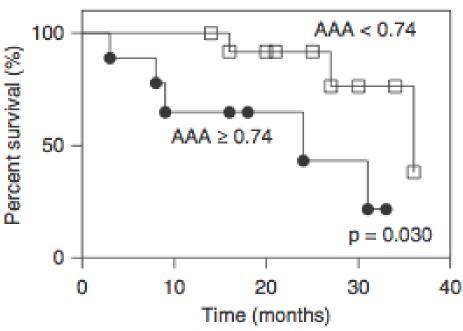




Antigen avoidance is first-line therapy

23 patients with Bird Fancier's Lung (mostly down comforters)



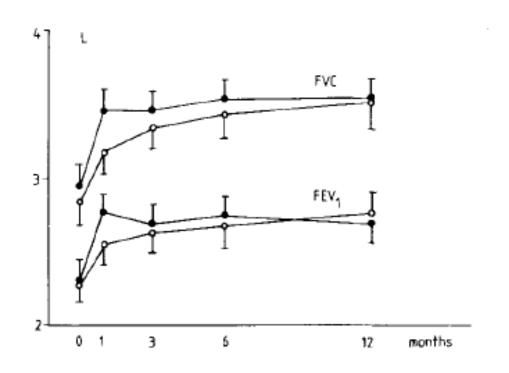


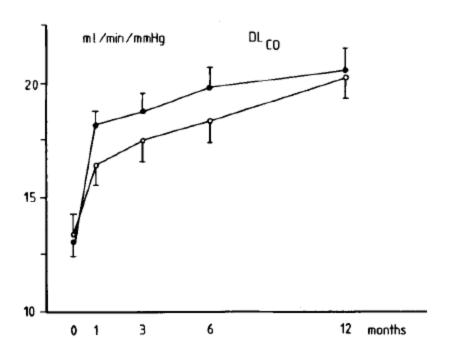




The impact of steroids on acute HP

• 36 patients with acute Farmer's Lung in a randomized, double-blind, placebo trial --20 received prednisolone (40 mg tapered over 8 weeks); 16 received placebo

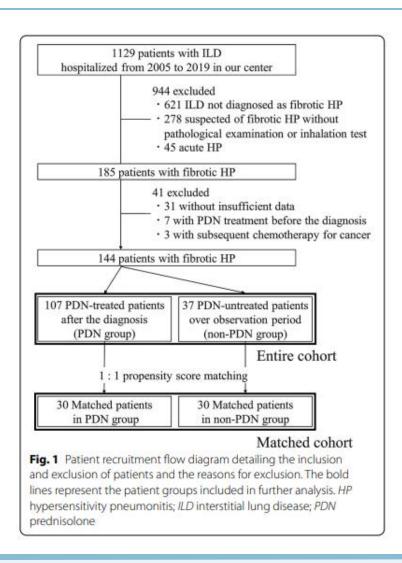








Steroids may be beneficial in cHP



Baseline characteristics:

Antifibrotics

13% pred group; 22% non-pred group (NS)

Immunosuppression

46% in the pred group (mostly CsA, TAC) 0% in the non-pred group





Steroids may be beneficial in cHP

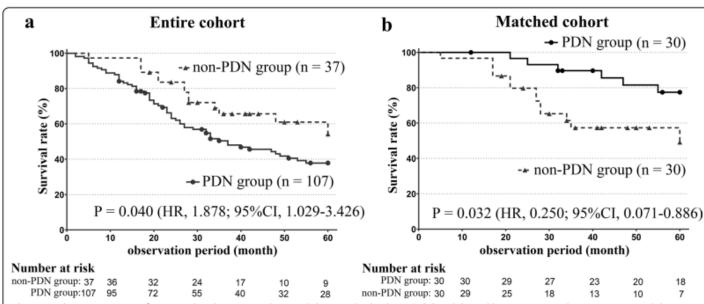


Fig. 2 Kaplan–Meier curves for survival in the entire cohort and the matched cohort. Solid and dotted lines represent the PDN group and the non-PDN group, respectively. **a** In the entire cohort, the survival rate was significantly worse in the PDN group, with P = 0.040 (hazard ratio [HR], 1.878; 95% confidence interval [CI], 1.029–3.426). The median survival periods were 37 months (95% CI 26–55 months) and NR, respectively. **b** In the matched cohort, the survival rate was better in the PDN group, with P = 0.032 (HR, 0.250; 95% CI, 0.071–0.886). The median survival durations were NR and 60 months, respectively. *CI* confidence interval; *HR* hazard ratio; *NR* not reached; *PDN* prednisolone; *SD* standard deviation

For the Entire cohort:

PDN group was sicker at baseline

FVC 58% vs 71% (p<0.001)

DLCO 45% vs 56% (p=0.005)

PDN group had more fibrosis

Traction bronchiectasis 93% vs 78% (P=0.03)

Honeycombing 58% vs 38% (p=0.055)

For the Matched cohort:

Most patients did not have extensive fibrosis

Propensity score based on the following: Age, sex, smoking history, %FVC, %FEV1, presence of honeycombing, traction bronchiectasis and mosaic attenuation on CT

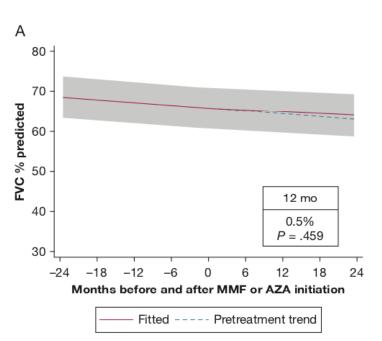


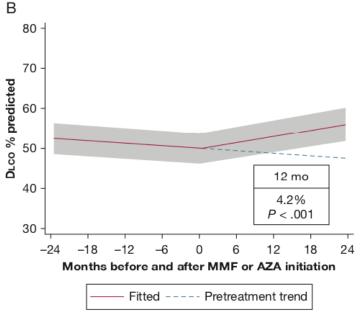


Steroid-sparing agents may be beneficial

Retrospective evaluation of 70 patients with chronic HP 51 received MMF 19 received AZA

(84% were receiving concurrent prednisone)



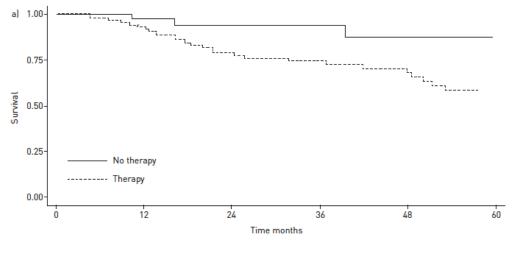


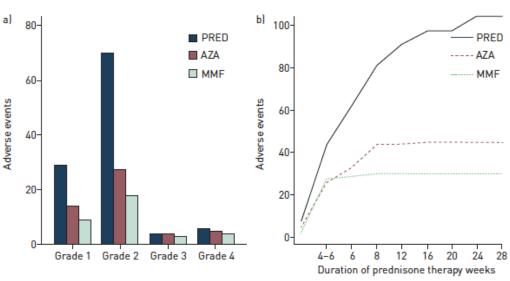
FVC 10% improvement in 13% of patients DLCO 10% improvement in 20% of patients Ave prednisone (mg/d) $12.3 \rightarrow 3.75$





Use steroid-sparing agents early if immunosuppression is needed





131 chronic HP patients71% received immunosuppression

Same outcome prednisone/AZA/MMF

TEAEs (vs prednisone): 54% less w/ AZA 66% less w/ MMF





Rituximab for chronic HP

Retrospective study of 20 cHP patients progressing despite antigen avoidance

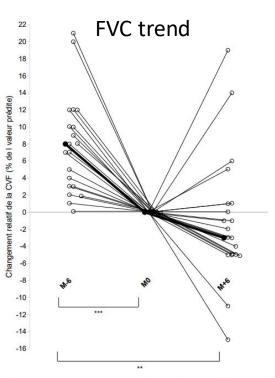


Figure 1: relative change in FVC (% of predicted value), 6 months before and after the introduction of rituximab (n = 20The median value is represented by the bold line. ** and ***: p < 0.01 and < 0.001, respectively.

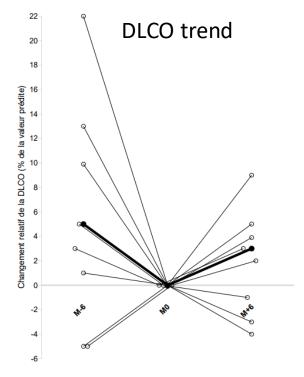


Figure 2: relative change in DLCO (% of predicted value) in 8 patients (for whom a DLCO value was available at the initiation of rituximab), 6 months before and after the introduction of rituximab. The median value is represented by the bold line.

Steroid trend

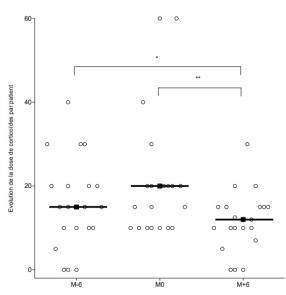
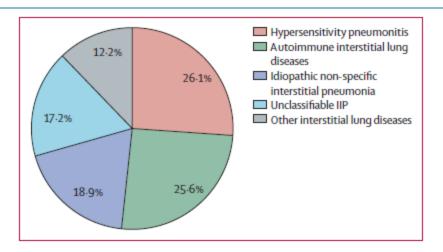


Figure 3: Difference in the dose of corticosteroids 6 months before and after the introduction of rituximab (n = 20). The median values are represented by the bold lines. * and **: p <0.05 and <0.01 respectively.





Nintedanib has been used to treat fibrotic HP (INBUILD trial)

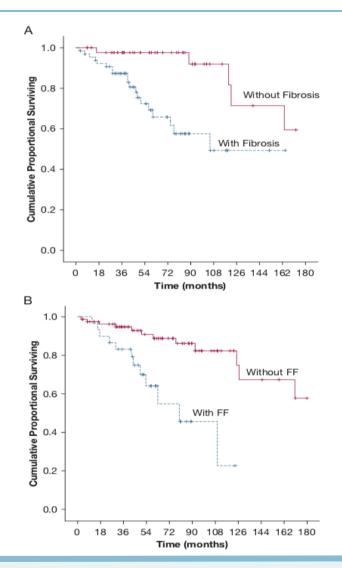


	n analysed		Difference (95% CI)	Treatment by subgroup by time interaction
	Nintedanib Placebo			
Hypersensitivity pneumonitis	84	89	73·1 (-8·6 to 154·8)	p=0-41
Autoimmune interstitial lung diseases	82	88	104·0 (21·1 to 186·9)	
iNSIP	64	61	141-6 (46-0 to 237-2)	
Unclassifiable IIP	64	50	68-3 (-31-4 to 168-1)	
Other interstitial lung diseases	38	43	197·1 (77·6 to 316·7)	
All patients	332	331	107-0 (65-4 to 148-5)	
			00 -100 0 100 200 300 400 500 Favours placebo Favours nintedanib	

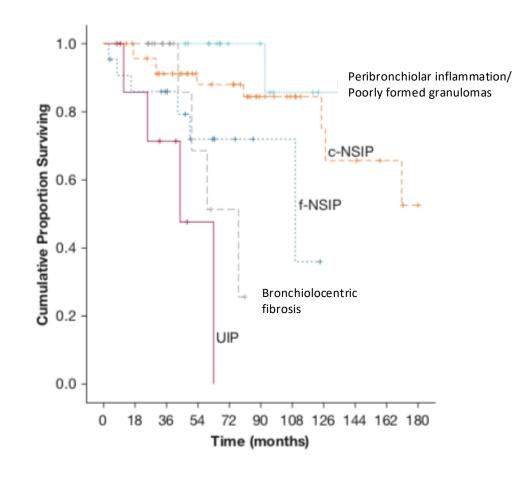




Pathology determines outcomes in chronic HP



119 patients with cHP and pathology











(Masks optional)





Summary

- HP can be challenging to treat, and frequently presents with a progressive fibrotic phenotype
- When identifiable, avoidance of the implicated organic antigen is critical
- The use of immunosuppression may improve outcomes for select patients with an inflammatory component of disease
- Antifibrotic therapy may play a role in patients with progressively fibrotic disease



