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Application of ISHAM guidance on ABPA diagnosis to a clinical cohort at a specialist clinic

Iain Page^{*1}, Malcolm Richardson², David W. Denning³

¹*University of Manchester, Manchester Academic Health Sciences Centre; UK National Aspergillosis Centre; University Hospital South Manchester*

²*University Hospital of South Manchester; Mycology Reference Centre*

³*Wythenshaw Hospital, Southmoor Hospital; Education & Research Centre*

Background: Consensus criteria for diagnosis of allergic bronchopulmonary aspergillosis (ABPA) were published by the International Society for Human and Animal Mycology (ISHAM) working group on ABPA complicating asthma in 2013(1).

Diagnosis requires all three of the following; 1 – Total IgE > 1000 IU/ml, 2 – Positive *Aspergillus*-specific IgE or skin prick test, 3 – Any two of the following ‘other’ criteria:- a) Positive *Aspergillus*-specific IgG or precipitins, b) Raised eosinophil count, c) Radiological features of ABPA.

There is little published data regarding the frequency with which patients treated as ABPA in clinical cohorts actually meet these criteria. We investigated this in a cohort of patients treated as ABPA.

Material/methods: We identified 151 patients diagnosed with ABPA at University Hospital South Manchester between 2011 and 2016. We searched clinic letters, radiology reports and results from local and regional laboratories for documentation that each criterion was met on at least one occasion. Radiological features were defined according to ISHAM guidelines.

Results: ABPA diagnosis by ISHAM consensus criteria was confirmed in 97 (64%) of 151 patients. Breakdown of individual test results is shown in the results table. All patients with positive skin prick test also had raised *Aspergillus*-specific IgE.

Conclusions: The publication of consensus criteria for ABPA diagnosis represents a significant step forward in the field of ABPA research. The guidelines acknowledge that in clinical practice some patients will fall short of these arbitrary criteria and should be labeled “ABPA – at risk” and monitored closely. We have demonstrated that a large minority of patients treated as ABPA at a specialist centre did not meet the consensus criteria and would be considered “ABPA – at risk”.

ABPA patients have years of disease and therapies. Some tests, notably total IgE and eosinophil counts, fluctuate over time. Capturing and verifying all data is challenging. However, those conducting studies must document that all patients categorized as ABPA meet the consensus criteria in full, as our study demonstrates that a historical diagnosis of ABPA correlates poorly with the new criteria. Further research is now needed to assess the appropriateness of each of the suggested diagnostic criteria.

Reference

1. Agarwal et al. Clin Exp Allergy. 2013 Aug;43(8):850–73.

Results table

Obligatory criteria	Number of patients n=151	'Other' criteria	Number of patients n = 151	'Other' criteria combinations	Number of patients n = 151
Total IgE > 1000 IU/ml	119 (79%)	<i>Aspergillus</i>-specific IgG or precipitins positive	107 (71%)	No 'other' criteria	4 (3%)
<i>Aspergillus</i>-specific IgE positive	146 (97%)	Eosinophil count raised	110 (73%)	One 'other' criterion	21 (14%)
Both obligatory features met	117 (77%)	Radiological features of ABPA	122 (81%)	Two 'other' criteria	60 (40%)
Full diagnostic criteria for ABPA met	97 (64%)	-	-	All three 'other' criteria	66 (44%)