

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

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Introduction

- Allergic bronchopulmonary aspergillosis (ABPA) is a relatively common complication of asthma that presents with frequent ‘exacerbations’ characterised by breathlessness and infiltrates on chest radiology.
- It is frequently complicated by bronchiectasis and is a cause of significant morbidity.
- Clinical diagnosis of ABPA and effective research into the disease was previously hampered by lack of a consistent case definition.
- The first consensus criteria for the diagnosis of ABPA were published by the International Society for Human and Animal Mycology (ISHAM) working group on ABPA complicating asthma in 2013¹.
- The proportion of patients with an existing diagnosis of ABPA who meet these criteria is not known.

Methods

- We identified 151 patients diagnosed with ABPA at University Hospital of South Manchester, UK (a regional referral centre for ABPA) between 2011 and 2016.
 - We searched clinic letters, radiology reports and the databases of local and regional laboratories to identify the number of patients who had documented evidence of meeting each of the following ISHAM diagnostic criteria on at least one occasion during their care:-
 1. Total IgE > 1000 IU/ml.
 2. Positive Aspergillus-specific IgE or skin prick test
 3. Any two of following “other” criteria:-
 - a. Raised Aspergillus-specific IgG or precipitins
 - b. Raised eosinophil count
 - c. Radiological features of ABPA (as defined in ISHAM guidance)
- Patients who met all three of the above criteria were considered cases of ABPA in terms of ISHAM guidelines.

Results

Table 1 – Obligatory criteria

Obligatory criteria	Number of patients (n=151)
Total IgE > 1000 IU/ML	119 (79%)
<i>Aspergillus</i> -specific IgE positive	146 (97%)
Both obligatory features met	117 (77%)
“Other” criteria met	60 (40%)
Full diagnostic criteria met	97 (64%)

Table 2 – Individual “other” criteria

Individual “other” criteria	Number of patients (n=151)
<i>Aspergillus</i> -specific IgG or precipitins positive	107 (71%)
Eosinophil count raised	110 (73%)
Radiological features of ABPA	122 (81%)

Table 3 – “Other” criteria

“Other” criteria	Number of patients (n=151)
No “other” criteria	4 (3%)
One “other” criteria	21 (14%)
Two “other” criteria	60 (40%)
All three “other” criteria	66 (44%)

Conclusions

- The publication of consensus diagnostic criteria for ABPA represents a major step forward for the field and creates the possibility of a consistent case definition for use in clinical care a trial recruitment.
- Our study shows, however that a large minority of patients currently treated as ABPA at a large tertiary referral unit do not meet the new consensus criteria.
- This finding occurred despite a thorough search of all available data sources to establish whether the diagnostic criteria had been met.
- Retrospective review of this nature in ABPA is challenging as the findings in ABPA vary with time and with effective treatment. As such it is very hard to exclude the possibility that patients met the new consensus criteria at the time of initial diagnosis at a referring hospital based on results we do not have access to.
- This does not imply that either the new criteria are inappropriate, or that existing diagnoses are wrong, given that they were made on the basis of the guidelines that were available at the time.
- However, it is clear that care must be taken to check that current ABPA diagnostic criteria are actually met prior to recruiting patients to studies on the basis of pre-existing ABPA diagnoses.

Reference -

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

Funding -

No specific funding was provided for this project.