

A broad immunological screening may impact treatment in bronchiectasis patients

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Abstract

The 2017 ERS guidelines suggest a minimum bundle of tests to identify immunodeficiencies (ID) in bronchiectasis (BE), including serum IgG, IgA, IgM, blood count and electrophoresis.

To test the hypothesis that an extensive bundle of tests might help in detecting more potentially treatable ID, an observational, prospective study enrolling consecutive non-cystic fibrosis BE adults was conducted at the Bronchiectasis and PCD Program of the Policlinico Hospital in Milan, Italy, from 2016 to 2018. In addition to the minimum bundle, patients underwent serum IgG subclasses, IgE, lymphocytes subsets, HIV test, ANA, ENA, ANCA and anti-CCP screening of tests. Primary ID diagnosis was based on ESID or IDF criteria.

Among 450 recruited patients (75% female; median age: 63 years), 149 (33%) had at least one abnormal result at the broad immunological screening and 82 (18.2%) had at least one ID diagnosis (see table).

N 450

Isolated IgG subclasses deficiency	47 (10.0%)
IgG1 subclasses deficiency	9 (2.0%)
IgG2 subclasses deficiency	5 (1.0%)
IgG3 subclasses deficiency	10 (2.0%)
IgG4 subclasses deficiency	38 (8.0%)
Isolated IgM deficiency	23 (5.1%)
Secondary immunodeficiency	14 (3.1%)

Isolated IgG deficiency	15 (3.3%)
Autoimmune disease	9 (2.8%)
Isolated IgA deficiency	11 (2.4%)
Common variable immunodeficiency	4 (0.9%)
Di George Syndrome	1 (0.2%)

A higher rate of patients with a diagnosis of ID has been identified by the extensive (18%) vs. minimum (8%) bundle of tests ($P<0.0001$).

Assessment of IgG subclasses can be helpful to detect potential treatable trait of BE patients.