

Clinical Research Results Abstract

Abstract ID = 11613

Presented by Janwillem Kocks on Saturday 13 June 2020

The sensitivity and specificity of specific IgE in diagnosing asthma

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Aim: Physicians still have diagnostic uncertainty in asthma. Since atopy is one of the predisposing factors for asthma, measuring specific IgE (sIgE) could assist in diagnosing asthma. This study aimed to investigate the sensitivity and specificity of sIgE to inhaled aero-allergens in patients diagnosed with asthma by a pulmonologist and showing clear bronchodilator reversibility (BdR).

Method: Data was used from a Dutch asthma/COPD-service, a structured system in which pulmonologists support GPs in their diagnosis of patients with suspicion of obstructive lung disease combined with data about sIgE measurements. Patients between 18-45 years were divided into 2 groups; A) asthma patients: with a pulmonologist diagnosis of asthma and BdR >12% and B) not asthma patients: where the pulmonologist indicated no obstructive lung disease and no asthma/COPD and no BdR reversibility. Patients were selected from the database via SPSS and sensitivity and specificity were calculated via crosstabs. Blood sIgE to any of the tested inhaled aero-allergens (grass pollen, tree pollen, house dust mite, cat dander, dog dander, moulds, weed pollen) ≥ 0.35 kU/L was considered sensitisation.

Results: Of 258 selected patients 186/258 (72%) patients were diagnosed with asthma and 72/258 (28%) had no asthma. In the asthma patient group, 136 were sensitized. Of the patients with no asthma, 33 patients were sensitized. The sensitivity of being sensitized in relation to the diagnosis of asthma was 0.73. The specificity of being not sensitized in relation to not having asthma was 0.54.

Conclusion: We have observed a reasonable sensitivity (0.73) and low specificity (0.54) for blood sIgE in relation to the diagnosis of asthma. This result is of great interest for improved asthma diagnosis in primary and secondary care. The measurement of IgE might have additional utility in the diagnosis of asthma, as sensitised patients are more likely to have asthma.

Declaration of Interest

No declaration of interest in relation to this abstract.