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Evidence for IgG Testing: Challenging the Status Quo Regarding Food Intolerance Tests

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Abstract: ***Food intolerance tests are controversial due to the lacking of evidence in support of their reliability. On the same note the theory underlying the test is not substantiated yet this lead many organizations to recommend against using it as a basis for testing food sensitivities. On the other hand, multiple reports demonstrate the utility of the test when used to tailor a patient's food choices which demonstrated reduction in a myriad of symptoms following the guidance of the test. This study is a 3 months analysis of patient symptoms after application of the test and following the patients regularly. The results show major changes in reported symptoms such as irritable bowel syndrome and many other symptoms over this time period. This study concludes that food intolerance tests are reliable and useful tools to guide dietary choices and can potentially improve patient symptoms. However, interventional studies are needed to demonstrate a cause an effect relationship between test use and symptom reduction in a more controlled manner.***

Keywords: Food intolerance tests, Immune mediated reactions Type 3 allergic reaction, IgG mediated allergy anxiety, depression, IBS, headaches, migraines, fatigue, eczema, asthma, joint pain

1. Introduction

Food intolerance tests are a subject of controversy due to the lack of clear evidence in support of their sensitivity, specificity and generalizability to entire food groups. On one hand, there is no single test to date that can detect multiple allergic responses at once given the varying pathophysiology and complexity of antigen/allergen relationships and mechanisms. This alone puts the specificity of food allergic testing under question, since it is not possible to rely on a single test to detect multiple allergens, let alone use it as a basis for screening and potential clinical and nutritional decision making.[1]

On the other hand, the reports of patients who used the test to make more conscious dietary decisions are growing with a trend towards a positive outcome based on patient reports. This personal reporting although lacking in rigour and could be confounded, warrants further investigation to establish the potential for such tests.[2]

Food intolerance isclassified in two major classifications: immune mediated reactions, and non-immune mediated reactions.

Immune mediated reactions are reactions that illicit an immune response after exposure to an allergen are usually referred to as allergies and occur when the immune system responds aggressively to foods that do not normally produce a response in the majority of people.

The overreaction triggers the immune system to produce antibodies to attack the foreign food proteins which the immune system recognizes as a threat. Allergies are grouped into four types

These classifications are based on what part of the immune system is activated and how long does it take for a reaction to occur.[3]

The two types of allergy that are most often associated with adverse reactions to food are:

Type 1 allergic reaction (hypersensitivity) known as igE mediated allergy; this is considered true allergy.

Type 3allergic reaction known as IgG mediated allergy associated with Food intolerance and food hypersensitivity. These reactions are characterised by the production of igG antibodies and the gradual formation of antigen/antibody complexes which are deposited in tissues causing chronic inflammation. They are responsible for the delay onset of symptoms, which can occur several hours or days after foods are ingested.[4]

Symptoms include anxiety, depression, IBS, headaches, migraines, fatigue, eczema, asthma, joint pain, chronic rhinitis and weight problems. It is possible to eliminate the offending food from the diet for a short period of time and then gradually reintroduce them when symptoms have improved to test which food is the offending agent.[5]

In many cases, patients suspect that more than one food may be eliciting a reaction leading to different symptoms. Thus they hope to find once single test that can help them identify the exact offending agents in their diet to avoid.

However, a single test for multiple allergens does not exist and therefore claims regarding one test capable of diagnosing food sensitivities warrants skepticism. One test with such claim is the food IgG test, it is offered by many physicians and made by many manufacturers under different names with a single common method of detection, namely, the IgG levels to multiple foods in a single panel. The central claim is that refraining from consuming certain foods that produce a high IgG level produces multiple improvements in multiple systems at once. Many claims about the utility of the test that can lead to improvements in symptoms varying from Autism, Irritable bowel syndrome, rheumatoid arthritis and epilepsy to name a few.[6]

An important concept to keep in mind is that the tests is scientifically questionable and have not been proven with a

high degree of specificity to achieve what it is claimed to do.[7]

Since there is no real evidence to support the effectiveness of the test, nor the specificity, the American Academy of Allergy, Asthma and immunology and the European Academy of Allergy and Clinical Immunology have made their recommendation to avoid using such tests to diagnose food allergy and intolerance.[8]

The objective of this study is to ascertain the clinical utility of the IgG food intolerance tests as a tool for clinical improvement in our patient population. Applying the food intolerance test on dietary choices and measuring the health benefits or lack thereof will shed some light on the utility of the test as a tool for clinical decision making.

2. Methods

This is a prospective observational study based on the IgG food intolerance test results. Patients who took the test were asked to refrain from eating foods showing positive on the test and were followed for 3 months. Different symptoms and complaints were recorded over a three months period and measures of reported improvements were recorded.

This study is a preliminary study to ascertain how useful the test is as a tool for dietary decision making. Improvement will be measured on the aggregate initially and further investigation will be conducted if the test proves clinical utility and produce a positive impact on the patient's life.

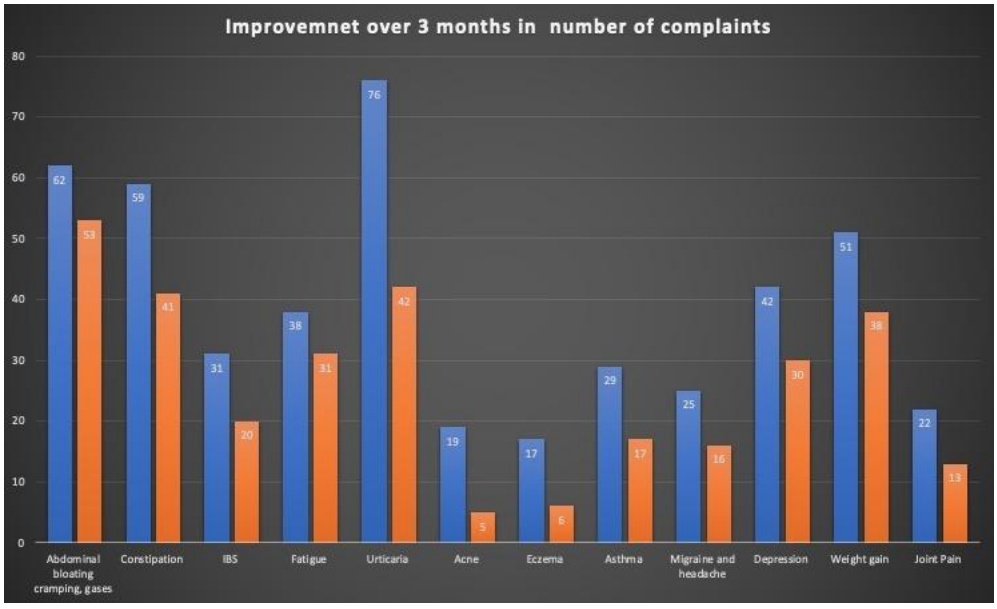
3. Results

This study is a prospective observational study on the effects of applying food tolerance test to 103 patients with varying complaints and recording improvements over 3 months. Patients were organized based on one of 12 complaints and subjective measurement was repeated 3 months later. Results are summarized in table 1.

Among the sample, 62 patients reported having abdominal pain, cramps or gas, 53 reported major improvements in three months. Constipation was a complaint of 59 patients and after three months 41 reported improvement. Irritable bowel syndrome was diagnosed in 31 patients who followed the recommendations of the food intolerance test and 20 of them reported major improvement in their symptoms. All changes over time can be seen in graph 1.

Table 1

Symptom	*No. Reported*	*No. Of Patients Improved After 3 Months*	*Percentage*
Abdominal bloating cramping, gases	62	53	85%
Constipation	59	41	69.4%
IBS	31	20	52.6%
Fatigue	38	31	81.5%
Urticaria	76	42	55.2%
Acne	19	5	26.3%
Eczema	17	6	35.2%
Asthma	29	17	58.6%
Migraine and headache	25	16	64%
Depression	42	30	71.4%
Weight gain	51	38	74.5%
Joint Pain	22	13	59%



4. Discussion

Increases in blood IgG are postulated to be related to food intolerance. This is the basis of food intolerance tests. However, this basis faces major skepticism on two grounds: First, no single available test to date can differentiate multiple allergens from multiple sources at the same time. This criticism of the test makes it difficult to connect any increase in IgG levels to any one cause.

Second, there is no evidence that establishes the reliability of the test in a clinical setting. This also makes it difficult to claim that the test is scientifically proven and therefore reliable

Thus on these two bases, the IgG test is not recommended for use as a screening test by international organizations.[9]

However, the current study demonstrates a clinical change that can be detected in patients following the guidance of the results of the test in their dietary choices. As mentioned in table 1, more than 50% of patients in ten categories under study out of 12 showed major symptom relief following the guidance of the test in their dietary choices. This evidence warrants a new look at the test as a clinical tool given the major improvement in symptoms.

5. Conclusion

Using food intolerance tests to assist patients in making a more conscious and deliberate food choices demonstrated improvement in 12 different symptoms followed in this study. Symptoms like IBS, constipation and joint pain showed the most significant change in symptom severity and number of patients reporting reduction of symptoms. It is therefore the conclusion of this study that food intolerance tests are a useful tool to guide dietary decision making but should only be used at the request of the patient until further clinical trials can demonstrate the precise utility of these tests.

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