Allergies and Other Sensitivities

Introduction

Through his writings, we know that Hippocrates, the father of medicine, had already recognized the presence of allergic reactions in people as early as ancient times. However, the term "allergy" is a relatively new one, as compared to many other commonly used medical terms.

In 1906, Viennese pediatrician Baron Clemens von Pirquet used the term for the first time to describe an "altered response" of his patients' bodies. Von Pirquet believed that this altered reaction manifested itself in changes of the immune system, effected by external influences on the body, such as: food intake, the air breathed or direct skin contact.

The term "allergen" (the substance responsible for the altered reaction) was born. At that point in time, however, von Pirquet had no means of scientifically proving that these immunological changes actually occurred in the body. It was not until the mid-1920's, that a second significant event occurred. Researchers found that, by injecting a minute quantity of purified allergen under the skin, certain individuals would develop a clear skin response; a "wheal," with or without itching and redness, could be provoked.

This positive skin test for allergies would show itself most prominently in patients with hay fever, asthma, chronic rhinitis, hives and eczema. The "prick test" became a method of demonstrating the involvement of the immune system in allergic reactions. However, the precise biological reason for the reaction continued to remain a mystery.

It was not until the Sixties, when an important discovery occurred which provided long-awaited scientific support for the classical allergy theory and removed any doubts about the relationship of the immune system with allergies. This breakthrough came about with the scientific discovery of immunoglobulin E (IgE) by a Japanese couple named Ishizaka.

Allergies

Allergic reactions: the chain of events

1. An allergen must be present in your body. This allergen is the substance that causes us to have an abnormal immunological response. Allergens tend to be protein molecules. Interestingly enough, the immune system only detects particles of a certain size as potential troublemakers and protein molecules are just the right size. In a small number of cases, the body actually responds to molecules other than proteins. These molecules, which are generally much smaller, are called haptens. By combining with protein molecules, haptens form larger complexes, which can then be detected by the immune system.
2. The allergen is detected by the B cells. These are specialized immune cells, capable of producing antibodies. Just like allergens, antibodies are protein molecules, which have the capacity to neutralize allergens.
3. Every B cell produces its own, specific antibody, depending on the type of intruder it needs to respond to. It is easy to understand why the body must have a ready pool of millions of antibodies, in order to combat these numerous offenders. There are five main categories of antibodies (IgG, IgA, IgM, IgD and IgE), which the body releases under different circumstances (for instance to fight off various infections, etc.). In the case of allergies, the body produces the antibody immunoglobulin E (IgE), first discovered by the Ishizakas.
4. Usually, antibodies will bind directly to the appropriate damaging substance and neutralize it. However, IgE deviates from this common path. It first attaches one of its "legs" to one of the body's numerous mast cells. The other leg is used to hold on to the offending allergen. This action signals the mast cells to begin disintegrating, thereby releasing histamine. Histamine is a chemical substance responsible for a great number of complaints, which may arise during allergic reactions. It causes muscle cramps and an inflammation-like process with redness and swelling of mucous membranes.

Allergic reactions can occur under a variety of circumstances. For instance, inhaling certain substances, such as grass pollen, house dust, etc., may cause an allergic response. However, the consumption of certain foods may do the same thing. Allergies typically bring on complaints very rapidly upon contact with the allergen. Complaints may vary from a runny nose, sinusitis, earache or runny eyes, to itching of the skin, eczema and shortness of breath. In rare cases anaphylaxis may occur: this is an extremely strong allergic reaction that may actually result in death if rapid intervention does not occur.

Intolerances

Demonstrating the presence of intolerances is more difficult. In this situation, similar to the case of classical allergies, the body responds abnormally to food but, in addition, the immune system does not produce IgE. It quite often takes much longer for complaints to come on, thereby masking the possible link between the offensive substance and the complaints themselves. This is why these reactions also tend to be called “hidden food sensitivities”. These are only a few of the reasons why food intolerance is considered a fairly controversial concept in conventional medicine.

Intolerances can be responsible for a wide variety of complaints, which, at first glance, seem to lack a plausible explanation. Intolerances can manifest themselves as:

- chronic fatigue;
- gastrointestinal complaints: mouth ulcers, nausea, heartburn, stomach ache, diarrhea, constipation (Irritable Bowel Syndrome), Crohn's disease, ulcerative colitis;
- skin complaints: itching, eczema, hives, acne (in adults);
- joint and muscle complaints: ranging from atypical pains (including fibromyalgia) to rheumatoid arthritis;
- headache and migraine;
- asthma, chronic rhinitis or sinusitis;
- pre-menstrual syndrome;
- hypoglycemia;
- depression, anxiety;
- candida;
- sleeping disorders.

Interestingly, allergies and intolerances seem to have increased dramatically over the past couple of centuries, coinciding with the industrial revolution. Not only does our environment suffer greatly (the rain forests are disappearing, the climate is changing and increasing numbers of animal species are becoming extinct), man is also being impacted.

There are strong indicators that the immune system is not able to adequately cope with the effects of pollution and thus creates abnormal responses. Not only do these abnormal responses manifest themselves in food and inhalant sensitivities, they can also appear as chemical sensitivity.

Multiple Chemical Sensitivity (MCS)

A small, yet growing, group of people is becoming sensitive to chemicals (perfumes, detergents, exhaust fumes, etc.). This is causing a wide array of complaints that make it increasingly more difficult to function in our modern society. The fact that most people suffering from multiple chemical sensitivity, also suffer from other sensitivities (foods, inhalants), indicates that the immune system as a whole seems to be affected greatly. Complaints may manifest as chronic fatigue, nausea, headache, dizziness, shortness of breath, eczema, and many more.

Diagnosing Allergies

Conventional medicine can easily diagnose classical allergies for foods or inhalants. Here, the so-called RAST test plays a very important role, because this test can demonstrate the presence of IgE.

Diagnosing Intolerances

It is impossible to accurately demonstrate intolerances through conventional testing methods. The Amsterdam Kliniek uses a non-conventional test procedure, which has proven to be very reliable and thus extremely useful. However, a 100% reliable test does not yet exist.

For several years, the Amsterdam Kliniek used the Cytotoxic Test. The disadvantage of this test was the fact that it was not automated (a drop of blood was examined microscopically), thus making it susceptible to a certain degree of subjectivity. For this reason a more advanced test procedure was introduced: the Neutrophile Test. Here, a drop of the patient's blood is mixed with a drop of food concentrate. Next, an adjusted hematology analyzer (machine that examines blood cells) measures certain changes in neutrophiles (specific kind of white blood cell) through direct current and radio wave frequencies. The changes in these neutrophiles reflect of the presence of food intolerances with a great degree of reliability. So the basis of the Neutrophile Test is the same as the Cytotoxic Test. The difference, however, lies in the fact that analysis happens via a machine as supposed to a human, thus making it more reliable.

Prior to the Neutrophile Test, the IgG(4) antibody test was used. Here, the presence of IgG(4) antibodies was determined. These antibodies are the slowly occurring variety, which do not appear in the blood until 24 to 48 hours after exposure to an offending food or substance. The reliability of this test left too much to be desired, and for this reason, we chose to abandon the test entirely.

Treatment of food allergies and intolerances

Diet

In the treatment of food allergies and intolerances, avoidance (elimination) of allergens plays an extremely important role. In the case of food intolerances the Neutrophile Test can help determine reactions to specific foods. Based on the test results, an elimination diet can be specifically tailored. Foods causing strong reactions in this test, should (temporarily) be excluded from the diet. Especially during the first week(s) of the diet, withdrawal symptoms, similar to complaints stemming from the cessation of coffee, tobacco or alcohol consumption, may occur. The body seems to crave offending food items. Generally, these withdrawal symptoms disappear after a couple of weeks. Concurrently, those complaints relating to food sensitivity also diminish. Using this dietary approach, the reaction to food allergens may decrease in the course of time. After a three-month moratorium, reintroduction of "forbidden" food items can be attempted, one at a time. In this way, food items still causing reactions can be isolated more easily. Often, at least part of existing intolerances completely disappears after an elimination diet. Additional dietary restrictions may apply based on a glucose tolerance test (see hypoglycemia) or other specific complaints (e.g. fermentation of the gut, etc.).

Medication

Medicines that are generally reserved for treating inhalant allergies, such as antihistamines (Tavegil, Zyrtec, etc.) and corticosteroids (Prednisone, etc.), in some cases, also diminish symptoms from food allergies and intolerances. Cromoglycates such as Nalcrom may also be useful. However, these only suppress symptoms, they do not produce a cure!

Desensitization

The provocation/neutralization (Miller) method and EPD (enzyme-potentiated desensitization) are very effective treatments for food allergy and intolerance. These methods tackle sensitivity problems at the root.

1. Provocation/neutralization can be used both diagnostically and therapeutically. Here, separate extracts of food, suspected as possibly offending, are injected intradermally. This causes a wheal to appear in the skin. After 10 minutes, the size and nature (firmness, color, etc.) of the wheal are evaluated. A positive wheal will generally bring on symptoms (provocation). Depending on the size and nature of the wheal, as well as, the presence of symptoms, varying concentrations are injected, until a dose is found which does not cause any wheal changes or symptoms. This is the neutralizing dose. Injections with the proper neutralizing dose will bring on immediate protection against the symptoms caused by the offending food. Some people have a tendency to develop an anaphylactic response to a certain food. Here, the body will respond so severely that a life-threatening situation may occur (for instance those who could die from eating peanuts). Since this treatment method uses injections, it is not suitable for those who have been known to respond in this extreme manner.

2. During EPD treatment, a small quantity of a food allergen mixture is injected intradermally into the skin, in conjunction with the enzyme beta-glucuronidase. This combination causes the body to gradually adjust its exaggerated responses to food allergens. In this way, the immune system is readjusted and reset. Initially, the injections have to be given once every two months. Gradually, however, the intervals between injections become longer and the injections can often be discontinued after a time. According to conservative estimates, at least 80% of those patients treated with EPD show considerable improvement in the course of time. There is an adjusted treatment procedure possible for those who have anaphylactic responses, thus making it possible for these people to be safely desensitized. Although complete cure may not be easily reached in these cases, the severity of the response can be greatly diminished so that anaphylactic responses in the future will no longer happen.

Treatment of inhalant allergies

Avoidance

Just like with food allergies and intolerances, the treatment of inhalant allergies starts with elimination. It is obvious that patients having an allergy for cats or dogs should avoid any contact with these pets. The situation becomes more difficult when dealing with allergies to grass or tree pollen, since total elimination is basically impossible. The same goes for house dust mite allergy. The house dust mite lives in mattresses, pillows, carpeting, drapes, upholstery, etc. Through mite-killing pesticides, special mattress covers, non-carpeted floors, etc. reasonable results can be obtained.

Medication

Medicines such as antihistamines (Tavegil, Zyrtec, etc.) and corticosteroids (Prednisone, Pulmicort, Becotide, Flixonase, etc.), cromoglycates (Lomudal, Lomusol, etc.) and airway dilation medication (Ventolin, Berotec, Atrovent, etc.) do suppress symptoms, however, they don not cure the allergy.

Desensitization

Both the provocation/neutralization method as well as EPD (mentioned earlier in the treatment of food allergies and intolerances) are very effective in the treatment of inhalant allergies.

Treatment of Multiple Chemical Sensitivity

Avoidance

As is the case in food and inhalant allergies, avoidance is a must. Patients should refrain from using perfumes, detergents and try to limit their exposure to chemicals as much as they can. Living in the modern world it is extremely difficult, however, not to be exposed to chemicals. The air we breathe is full of fumes and exhaust, people around us wear after-shaves, perfumes and smoke cigarettes; even a simple newspaper can give off a chemical smell. Some people move out into the country, where the air tends to be cleaner. But not everybody is able to make such a move, not to mention the fact that doing this may not bring sufficient relief.

Medication

In some patients, antihistamines (Tavegil, Zyrtec) and corticosteroids (such as Prednisone) may bring relief, however, these only suppress symptoms and are not a cure.

Detoxification

By detoxifying the body, the immune system is allowed to restore itself and thus regain its proper function. This can be done through diet, food supplements and also by removing harmful toxic metals from the body (see Environmental Medicine).

Desensitization

Although definitely not a panacea, EPD (as mentioned earlier for food and inhalant allergies and intolerances) has been proven to be a very effective treatment for multiple chemical sensitivity.

Additional information on Candida and Hypoglycemia

Candida

The body can house numerous bacteria, parasites or yeasts without actually producing symptoms or disease. Candida albicans is one of those commonly occurring yeasts that does not necessarily cause problems, however, in some cases it starts to grow more rapidly. This tends to happen especially in people whose health is already compromised by allergies or intolerances. As a consequence, the absorption of substances via the intestinal tract lining is disturbed, allowing (more) allergens and toxins into the body and thus weakening the immune system even further. Gastrointestinal complaints, fatigue, migraines etc. could result. Treatment is not only aimed at anti-fungal medication, food supplements and dietary restriction of yeast-stimulating foods, but first and foremost at treating the underlying food allergies or intolerances. The fact that certain patients do not find sufficient relief of their symptoms tends to lie in the fact that these underlying sensitivities are not tackled.

Hypoglycemia

Quite often, the blood sugar (glucose) regulatory system is disturbed, with a special tendency towards low glucose levels known as hypoglycemia. Hypoglycemia is a condition characterized by strongly fluctuating glucose levels, showing dramatic drops in these levels during the course of the day. Spontaneous hypoglycemia may manifest itself in the form of headaches, sleeplessness, sweating, shakiness, irritability, anxiety and panic attacks, hyperventilation and depression on the one hand, as well as in bouts of fatigue, mental fog, weakness and a craving for sweets on the other hand. It is true that many patients tend to feel better after eating, but this is generally a short-lived improvement. A 5-hour long glucose tolerance test is instrumental in demonstrating hypoglycemia. Food allergies and intolerances almost always seem to be at the root of the problem, so avoidance of sugar and sweets alone generally does not suffice.

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