

Allergies and Other Sensitivities

Although allergies were known for centuries, the term allergy came to be used only in early 1900s, when a pediatrician in Vienna used the term for the first time to describe altered response of his patients manifested in changes in immune system. These responses were caused by external influences on the body, such as food consumed, air inhaled or direct contact to skin. The substance responsible for this altered reaction was called "allergen" although at that time there was no scientific knowledge about the immunological changes occurring in the body. Two decades later, it was found that by injecting minute quantity of pure allergen subcutaneously, certain individuals would develop a clear skin response. This skin test would show most prominently in patients with hay fever, asthma, chronic rhinitis, hives and eczema. The test itself became a method of detecting sensitivity although it was not until sixties that with the scientific discovery of immunoglobulin E (IgE) established the relationship of immune system with allergies.

Following events occur in allergy reactions. An allergen enters the body which may be a protein molecule of a certain size, although less commonly body may also react to molecules other than proteins. These non-protein molecules which are much smaller than proteins, are called haptens. By combining with protein molecules, haptens form larger complexes which can then be detected by the immune system.

The allergen is then detected by the B cells. These are specialised immune cells, which can produce antibodies. Antibodies are also proteins having the capability to neutralize allergens. Every B cell makes its own, highly specific antibody, depending on the type of allergen. There are five main types of antibodies (IgG, IgA, IgM, IgD and IgE) which are produced under different circumstances like to fight various infections etc. and in case of allergies IgE is produced.

Antibodies will normally bind this invading substance and neutralize it, but IgE works differently. It attaches to one of the body's many mast cells while holding on to the allergen. This action directs mast cells to disintegrate releasing histamine which is responsible for symptoms during allergic reactions such as muscle cramps, inflammation-like process with redness, swelling of mucous membranes etc.

Allergic reactions can occur under different circumstances like inhaling grass pollen, house dust etc. Certain foods may cause these reactions although not necessarily in all the individuals. Allergies very rapidly give rise to some of the symptoms like runny nose, sinusitis, earache or runny eyes to itching of the skin, eczema and shortness of breath.

Intolerances

Diagnosis and treatment of allergies is straightforward especially using the RAST test to demonstrate the presence of IgE. However, demonstrating the presence of intolerances is not so easy. Here also the body responds abnormally and in addition the immune system does not produce IgE. Symptoms take much longer thereby establishing link between the offensive substance and the symptom becomes more difficult. Intolerances cause a wide variety of complaints, which on the face of it seem to lack a probable cause. They may cause some of the following: gastrointestinal complaints (stomach ache, irritable bowel, Crohn's disease, ulcerative colitis etc.); skin complaints (itching, eczema, hives, acne in adults etc.); joint and muscular complaints like atypical pains or rheumatoid arthritis; headache and migraine; chronic fatigue, asthma, chronic rhinitis or sinusitis; pre-menstrual syndrome; hypoglycemia; depression, anxiety; sleeping disorders etc.

It is extremely difficult to accurately demonstrate intolerances through conventional testing methods. Two test procedures have proved to be quite reliable. In the cytotoxic test, a drop of patient's blood is mixed with pure liquefied food concentrate. In case of normal tolerance to this specific food, white blood cells remain intact, but if tolerance is of lesser degree, white blood cells swell and possibly granulate. In severe intolerance, cells will actually blow up and disintegrate. Detection test has about 80% reliability.

Another test that is useful is IgG(4) antibody test wherein the presence of these antibodies is determined. These are slow to appear and do not show up in blood until 24 to 48 hours after exposure to an offending food or substance. Reliability of this is 80-90%.

Treatment

Avoidance of allergens plays a major role in treatment of inhalant allergies, food allergies and intolerances. In case of food sensitivity, the tests can help determine reactions to specific foods. Using the test results, the elimination or rotation diet can be specifically tailored. Foods with strong reactions, should be excluded whereas foods with more moderate reactions can be rotated in the diet. These may be eaten once every four days. Especially in the initial period, withdrawal symptoms may occur. Body seem to crave for these offending foods. After a couple of weeks, these withdrawal symptoms disappear along with the complaints due to the sensitivity. After a 3 month control, these omitted foods may be reintroduced, one at a time. This way foods still causing reactions can be isolated more easily. Quite often, at least part of the existing intolerances completely disappear after an elimination/rotation diet. Medicines for inhalant allergies, such as antihistamines, corticosteroids, airway dilating medication etc. do suppress symptoms, however, they do not cure the allergy. In the realm of conventional medicine, effective medications for food allergy and intolerances do not exist at all.

Desensitization

Enzyme-potentiated desensitization (EPD) and the provocation/neutralization method are effective for food allergy/intolerance and inhalant allergy problems. These tackle allergy at the root. During EPD, a small amount of food or inhalant allergen mixture is injected subcutaneously along with the enzyme β -glucuronidase. This causes body to slowly adjust its responses to food allergens. In this manner, immune system is readjusted and reset. The injections start with 2 month frequency but gradually intervals are longer and longer. At least 80% of those patients treated with EPD show considerable improvement. Provocation and neutralization can not only be used diagnostically but also therapeutically. Here extracts of suspect foods injected intradermally. This causes a wheal to appear in the skin. After 10 minutes, the size and nature (firmness, colour etc.) of wheal are evaluated. Depending on size and nature of wheal, as well as symptoms, varying concentrations are injected. A dose is found with no symptoms. This is the neutralizing dose. Injection with proper neutralizing dose will protect against symptoms caused by offending food and/or inhalant.

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