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REVIEW ARTICLE

ELEMENTS OF PSYCHOSOMATIC ALLERGOLOGY

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ABSTRACT

Allergy is one of the most widespread diseases in the world. If the twentieth century was considered cardiovascular disease period, then XXI st century, after a forecast of the World Health Organization, will be a century of allergies. The number of allergy sufferers incessantly increase, this increase being higher in summer, while in winter is increasing respiratory allergic diseases. The mechanism of allergy consists in disorder of the immune response to certain stimuli, modifying the reactivity of substances and antigens molecules, in most cases being harmless to the body. A typical characteristic of allergic reactions is the damage of the organs, tissues and cells. The causes of triggering of allergies can be external - environmental factors - macro ecological (climate, season) and microecology (housing, employment). Internal causes are more complexes. It can include heredity, which regulates the functioning of our immune system; neuroendocrine dysfunction or the central nervous system, chronic infection outbreaks.

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INTRODUCTION

The domain of the allergic disease is, in reality, smaller than that of medical care currently performed for a number of patients which are pointed as allergic persons. The so-called allergic diseases are, in fact, syndromes (e.g. asthma, rhinitis etc.), whose etiology may be represented not only by allergens, but also by other etiological factors not allergic too (infectious, toxic, etc.), including the psychic.

Immune System Function

The role of the immune system is to defend the body against intruders that could affect it - germs, viruses, parasites, tumor cells and all that is outsider to own body. The immunity is formed with the correct answer to antigens. The allergy is caused by an immune system disorder. In conditions of a disorder, the immune system begins to react strongly to perfectly normal environmental substances, produces antibodies excessivelly, which are proved unnecessary and, as a result, it damages the body's own. The mechanism of this exaggerated response is not known. The interaction between the antibodies that respond to allergens (IgE - immunoglobulin E) and allergens, leads to the formation of substances such as histamine, leukotrienes, and other mediators of allergy. In allergies such substances are in excessive amounts, and this affects neighboring tissues and organs, and sometimes the entirely body. It determine also the allergy symptoms: sneezing, runny nose, nausea, vomiting, abdominal pain, coughing and choking, etc. The histamine is the principal mediator of allergies, since most of allergy preparations are designed to combat precisely this substance. The response mechanism of the immune system, that leads to allergies, is impossible without the participation of some important components of the immunity - T lymphocytes. Studying the cytokines - special mediators between cells that compose the immune system - can find the way that the immune response is achieved. It has been found that lymphocytes, in the case of allergies, are involved T42 lymphocytes. An invader entered in the organism is ingested and processed by macrophages which send chemical messages (cytokines) that attract other leukocytes. Cytokines can sometimes cause fever, headache or muscle aches. The newcomers leukocytes is attaching to the macrophage to learn more about the invader, so they can develop specialized defensive mechanisms form of T and B cells. The T cells kills the invader or help to coordinate an immunological response. The B cells create antibodies that act like bullets that destroy the invaders. When everything is ready, the excess of white blood cell are suiciding (apoptosis) to not kill healthy cells by mistake and not cause an autoimmune disease such as lupus, irritable bowel syndrome and rheumatoid arthritis.

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Types of allergies

Immune system's response to one or the other allergens depends on many factors: the peculiarities of the allergen, sensitivity degree of the body, the way in which the allergen enters to the body, existing diseases at that time, amid which develops the reaction, etc.

Most allergic people react to a whole spectrum of allergens. Depending of all of these, the most common allergies are: respiratory allergies, allergic dermatoses, food allergies, the allergies due to insect, drug allergies, infectious allergies.

Allergies have come to affect more and more people. Allergens, such as are called the substances which determine violent and exaggerated reactions of the body, are extremely varied and depending on their amount depends on the severity of allergy symptoms. Allergies to dust, pollen, various foods, animals, mildew are common, but here's a list of the most rare and strange forms of allergy cited by specialized literature (Andrews *et al*., 2007):

1. The allergy of own child - a young woman of 28 years from the UK are among people diagnosed with this extremely rare form of allergy. She discovered that herthe body reacts strangely when she is trying to get closer to her newborn child, more exactly, her skin being covered with burns strong and when she has hugged her child she felt pain throughout entire body. After conducting a biopsy, doctors discovered that the woman is suffering from Pemphigoid Gestationis, an extremely rare skin disease caused by an allergy to her own child. According to doctors, the condition was developed during pregnancy and in the world are known just a few similar cases.

2. Allergy to water - this form of allergy occurs on one on every 23 million people in the world. Known as *aquagenic urticaria*, it causes painful red spots on the neck and chest in contact with water. It seems that high levels of histamine may play an important role.

3. Allergy to kiss - although there are no known cases of allergy to kiss itself, a passionate kiss can be deadly for someone which have an allergy to the food, cosmetics or drugs. Is known the case of Jamie Stewart who have 17 years old that went into anaphylactic shock and had to be hospitalized after being kissed by a person who had eaten peanuts.

4. Allergy to sex - some women are allergic to their partner's semen, and in very rare cases this allergy can cause death. Symptoms include burning sensation, rash and appear on few minutes after intercourse. In this case, only condoms can help women.

5. Plastic allergy - affected people can not drink water from plastic bottles, can not use plastic cutlery, bank cards, glasses, keyboards and any object that has the plastic composition. Contact with plastic, painful skin reaction occurs, sometimes accompanied by shortness of breath.

6. Wood allergy - are people in the world who can not sit around timber or object of wood. Some people are only allergic to some types of wood or only certain forms, eg sawdust.

7. The allergy to sunlight - solar urticaria - is a rare affection, in which the exposure to ultraviolet radiation, sometimes even simple light, causing the appearance of itchy blisters that may arise in areas covered and uncovered skin.

8. Allergy to mobile phones - doctors says that the number of people allergic to the mobile phone is increasing. They present red lumps, itching or pain in the jaw, cheek and ear. This allergy is actually an allergy to nickel. Increased use of mobile phones has led to prolonged exposure to nickel, a metal that is used for buttons, screens and masks.

9. Heat allergy - heat allergic people are itching and rash reddish. These reactions occur when the body heats up, either due to showers, saunas, exercise or effect of spicy dishes.

10. Allergy to cold – also on the skin is manifestes the allergy to cold and also by the appearance of red spots, especially on the face and hands. To distinguish this type of allergy by another dermatological disease test may be ice. Place an ice cube on the patient's forearm and after a certain period of time, there is reaction. If the skin will become red immediately, the person can stay quiet is not allergic.

11. Training allergy - about 1,000 people is suffering from anaphylactic shock induced by exercise. The patient accuses fatigue, itching, hives or swelling of the throat, during or immediately after exercise, and symptoms can last several hours.

12. Allergy to touches – people who is suffering from this allergy are sensitive to touch and, depending on the gravity of the case, even a light touch can trigger an allergic crisis. This is manifested by a red skin rash, itchy. There is no known reason for it, but it is estimated that between 2 and 5% of the population suffer from it.

13. The allergy to natural rubber (latex) - occurs on people who are frequently exposed to rubber products, such as: health care workers, patients who underwent numerous surgeries. Medical latex products are numerous: medical gloves, drainage tubes, bandages, probes urination, adhesives bandages, plasters, bandage. Consumer products containing latex are some contraceptive condom and diaphragms, children diapers, pacifiers and baby bottles, rubber belts, mouse - pad - computer sites, etc.

The causes of allergies

The studies have shown that there is a genetic predisposition hereditary, so a person who has a parent with an allergic disease have an increased risk of developing such a disease itself (Luban *et al*., 2002). Imuntar system from a healthy person has the duty to defend the body against foreign bodies such as bacteria, viruses and toxins. On people prone to allergies this protection system is very effective and its perceived as dangerous the common substancesas flower pollen or mold. After contact with an allergen, the body of a person allergic produces a large amount of antibodies (proteins that defend the body against disease) which is fixed on certain cells in tissue and blood and releases chemicals that circulates through the body, triggering allergy symptoms.

Psychological causes of allergies

Psycho-emotional factors (stress, fear, phobias) can cause or exacerbate symptoms. Allergies are Group immunological disorders. It is known that immune reactions can be modulated by factors nervous (not only emotional but also representation) may trigger a crisis (known observation of Mackenzie that caused a patient, allergic Rose, an asthma attack, presenting them a rose paper cit (Ionescu, 1995). There conditionings of asthma attacks and emotions that induce private patients in crisis: anxiety, a state of anger lived in a diffuse excitation (Smith *et al*., 2004). Chronic stress and strong emotions may contribute to the onset and worsening of asthma. Stress refers to the experience of events that are perceived as dangerous to our physical and mental wellbeing. Controllability of a situation also affects the size of stress. Our perceptions about controllability are as important as the actual controllability of the situation. Also, internal conflicts - unresolved issues that can be conscious or unconscious, may cause stres. The organism reacts to stressors agents by initiating a complex sequence of reactions. The sympathetic nervous system causes increase in heartbeat, high blood pressure, dilated pupils and release an additional amount of carbohydrates in the liver. The adrenal cortical causes release adrenocorticotropic hormone (ACTH), which stimulates the release of cortisol in the blood, being able to assess the level of stress (Vuurman *et al*., 1993).

These reactions are part of the general adaptation syndrome, displaying a set of reactions by the body in response to stress, it consists of three phases: alarm, and fatigue resistance. Stress may directly affect health by creating a chronic overactivation of the sympathetic part of the autonomic nervous system or suprarenalcortical system or affecting the immune system. By means of specialized cells called lymphocytes, the immune system protects the body from disease-causing microorganisms. This affects the susceptibility of an individual to develop infectious diseases, allergies, cancers and autoimmune diseases (Iamandescu, 2007). Perception of control appears to mediate the influence of stress on the immune system of humans. The immune system is incredibly complicated, using many arenas that interact to protect the body. Current studies provide increasing evidence for that has numerous connections nervous system anatomy and physiology. For example, lymphocytes have receptors for neurotransmitters and that a number of these immune cells are equipped to receive messages from the nervous system that can change how to behave. The discovery of a link between neurotransmitters and the immune system is important because negative emotions such as anxiety or depression may affect neurotransmitter levels, becoming more clearly how mental attitudes affect health.

Psychological factors and responses to stress

Psychoanalytic theory suggests that stressful events are generating conflicts when our inconştiene wake. Psychologists argue that behavioral targeting people react to specific situations with fear and anxiety because these situations are causing damage or were generating stress often in the past. Cognitivist theorists say that the type of award or causal explanations found the topic influence its reaction to stress. People tend to attribute negative events to internal causes, stable and global are more likely to develop symptoms of learned helplessness after experiencing such events and getting sick. If life events play a role in somatic disease etiology, it is likely that they are "triggers" or clumping causes rather than "formative".

Emotional states and conflicting role in the onset and maintenance of allergic reactions

Asthma - Defined as a recurring disorder obstructive airway bronchial who tend to respond to a variety of stimuli by bronchoconstriction, edema and secretion, asthma can be characterized as an obstruction generalized airway etiology multiple, varied the duration and intensity, which occurs in people with bronchial hyperactivity in a variety of stimuli (Priffis and Anthracopoulos, 2008). Numerous clinical observations and scientific research have shown that anger, frustration, fear and rejection, loss or jealousy may precede asthma attacks. In most cases, psychological factors interacting with allergic and infectious trigger asthmatic crisis (Taylor, 1979). The literature mentions asthma predominantly psychosocial (ie disease asthmatic sociogenă) present in children presenting with neurotic disorders and had strained relations with family and asthma predominantly biological disease (primary biogenic), present in children without problems neurotic (other factors are the origin of the crisis). Psychological investigations in asthmatic patients showed a slight adaptation difficulties to relate because introversion, self-centered, excessive shyness and sensitivity. Others show the fore suspicion, hostility, poor coping possibilities and guilt. Children have a behavior illustrated by a weak impulse control, affect lability, immaturity incongruent age, irritability, explosiveness. Also, the literature states that studies of personality traits and behavior were carried out after disease onset, so have a retrospective character, which does not allow any indication prospective extraction. In other words, one can not assume that such a structure is an element favoring the disease, but the disease through its clinical phenomenology of mental modeled this structure (Fontaine and Fontaine, 2008).

Hives - anger, fear, guilt and even sexual problems associated with psychogenic itch. Allergies can thus be an indicator of health and feelings that are threatened.

Skin and mucous membranes are the place where conflicts and unrest manifests to warn us that something is wrong in our subconscious. People easily irritable, tense, anxious complain of itching. This is because the skin acts as a mirror of our feelings. In general, those who suffer from hives are emotionally vulnerable, passive in dealing with others, fearful and insecure. Itching usually worsens in tense situations, stress stronger.

Migraine - has a multifactorial etiology, manifested by headaches, localized hemicranianã and throbbing. The management requires interdisciplinary cooperation through the collaboration of several specialists (neurologists, psychologists, psychiatrists, ophthalmologists, specialists in internal medicine).

The literature describes two classical syndromes (migraine with aura and migraine without aura or neurological). Each of these may be preceded by changes in mood and appetite, premonition. The classic type presents an obvious disturbance of neurological function, followed by 10-30 minutes of headaches hemicraniene or sometimes bilateral, nausea, vomiting. Triggers of a migraine can be endogenous - periodic activation of certain hormonal mechanisms, hematological, cardio-circulatory, etc. (Loisy, cit.) - and exogenous relatively constant and well known. Factors include many psychological stimuli from the sensory (noise, smell) to the behavioral (smoking excessive physical exhaustion, self-punishment, etc.) continuing with intense emotions (positive or negative). Experimental data show an increased histamine in serum of patients with acute stress before tooth extraction (J.Ring, cit. 10). Also, an unexplained malaise (popularly called the "evil eye"), with very big headache, accompanied by vomiting, can be caused by admiring glances or provocative to some people. It is noteworthy that these sudden headache, gives the suggestive power of prayer or the charm, thus highlighting the role of psychological factor in downgrading migraine attack. Dietary factors - can cause cluster headache, migraine and attacks. Whatever the nature of allergic or non-allergic of mechanism, substances in food, pneumoalergeni or certain drugs may induce a migraine attack due to the effect of specific antibody levels of vasoactive substances.

Allergic rhinitis - by definition requires the presence of an allergic inflammation likely exacerbated by a series of non-specific triggers, including psychological ones (Iamandescu, 2002). Considering the mechanisms of release of mediators of allergic reaction, can differentiate three modes of action of mental factors in posture triggers nonspecific, non-allergic in symptom onset RA (sneezing, runny nose, swelling of the nasal mucosa and obstruction persistent) namely: non-specific histamine release (including mast cell degranulation), hyperventilation under stress (common in anxiety) and trigger-conditioned reflex by associating visual stimuli regardless initially with olfactory stimuli.

Psychiatric disorders may be induced allergic and dermatological

Asocialte secondary psychiatric disorders are disabling nature of dermatological diseases (psoriasis, vitiligo). Koa and Lbwohl (w.w.w.aafp.org/atp) emphasizes that the issue lies in disabling disfigurement caused by dermatological condition itself and leads to lower self-esteem, depression, anxiety or social phobia. In general, those who suffer from hives are emotionally vulnerable, passive in dealing with others, fearful and insecure. Itching usually worsens in tense situations, stress stronger. Emotional component is very important in case of diseases such as psoriasis, asthma, urticaria. Psoriasis occurs due to insecurity, and this feeling can generate most cases, social phobia. Predisposition to interpret social situations as dangerous is genetic, while individual interpretations of social cues are determined by the environment (particularly the trigger anxious conditioned response depends on the social situation in which the first episode occurred anxious). We present two cases to exemplify the interdependence of psychic and somatic (Cruz and Bahma, 2006):

1) A patient who was suffering from gluten intolerance and social phobia, says giving up foods containing gluten health had improved, with positive effects on quality of life, and thereby the healing of social phobia:
2) A patient with asthma, you treat inhaling steroids, but the name allergies in comorbidity with social phobia. She believed he was suffering from social phobia is like asthma and allergies, which are already disorders of immunity "suffer an allergic shyness, she quipped, an allergy to eyes and appreciations".

We note that social anxiety is normal and benign useful, serving as a social shock absorber. Sometimes it becomes too significant (stage fright, shyness) and resembles a state of embarrassment, sometimes, but it becomes pathological when social phobia.

This state can be compared to what is happening with immunity: This feature natural defense, and adapted exceeds its desired purpose allergies moderate (embarrassing) or severe (dezabilitante) through a normal amplification morbid phenomena. Social phobias are like "fear of allergic reactions" excessive and toxic. In somatic, the body's defense mechanisms are exaggerated, allergies and psychically, defense mechanisms are maladaptive, where social phobia. Food allergies occur in affective disorders (depression), anxiety or psychotic disorders by pseudo-allergic mechanism. The researchers noted that studies are needed aiming to determine the mechanism by which produces the association between mental disorders and allergies, as well as the discovery of methods of prevention. For children, there is "allergic irritability syndrome" because they can not express allergy symptoms and maladaptive behaviors manifested by (irritability, aggression, hyperactivity, hostility, social isolation, disturbance in attention, etc.). Also etiology hyperkinetic syndrome (ADHD) was explained by allergy or intolerance to food additives.

Mostafa and Genah (cit.14) showed a significant frequency of allergic diseases (atopic dermatitis, bronchial asthma, allergic rhinitis, in autistic children. In addition, allergic immune response to some proteins, such as food or latex results in the synthesis of antibody cerebral blood that are found in autistic children (Iamandescu, 2009). Wunderink (cit.15) showed the existence of intolerance to gluten to 40% of schizophrenic patients, and a few cases of intolerance amino acids, glycine and serine as associated with the formation of beta-carbolin, schizo-affective psychosis experienced unrest perceptual or temporal disorientation. Interdisciplinary research has shown the existence of interconnections close of the central nervous system, endocrine system and imuntar, suggesting the involvement of mechanisms psycho-neuro-allergic and / or endocrine responsible for the association between mental disorders and allergic diseases by clarifying and identifying factors ethiopathogenic hypothetical triggers, determinants, promote, and maintain predisposing symptoms. Psychotherapeutic approach is helpful in reducing anxiety accompanying allergic manifestations and identify the causes of psychiatric conditions and precede these events. The objective of psychotherapy is to reduce the intensity of anxiety and phobias, improving interpersonal relationships, detecting, and resolving conflicts revaluation, so frequently involved in

triggering the crisis. Relaxation techniques are used, especially in children's asthma. Behavior therapy assumes that asthmatic crisis is initially unconditional response to allergens because then, through classical conditioning processes, become a conditioned response to stimuli neutral. The immune system has evolved as a tool to cope with threats to the body, threats originating both inside and outside his being from this point of view a kind of sixth sense. Its interactions with other organ systems (nervous / behavioral and endocrine / hormonal) gives the immune system not so simple image of a body, but rather that of a component of a complex system, which includes several points physical body.

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