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The psychology of multiple allergy

Encouraging return to active life is better than reinforcing social withdrawal and disability

Many people present to their doctors with multiple unexplained symptoms which they attribute to allergy. Such subjects develop symptoms in response to many substances including foods and chemicals and therefore avoid contact with them. Epidemiological research has confirmed the large discrepancy between self perception of allergy among the public and its detection by objective methods. For example, in a study of 30 000 people in High Wycombe a 7% prevalence of perceived allergy to food additives was found, whereas the prevalence of reactions detected by double blind challenge (the definitive test) was only 0·023%.[1]

Those at the extreme end of this range often attract a diagnosis of total allergy syndrome, multiple chemical sensitivity, or environmental illness—diagnoses that most allergists or immunologists repeatedly reject.[2,3] These patients have no consistent physical or immunological abnormalities.[4,5] The failure of conventional allergic mechanisms to explain symptoms has led to suggestions that, although these patients do not exhibit allergic mechanisms, they have ill understood intolerances or sensitivities.[6] When patients are tested by double blind challenges, however, few react consistently to the substances in question.[7,8]

If the problem is not one of allergy then what are the possible causes? Research has shown the relevance of psychological disorder.[8,9] Black and colleagues found that 17 of 26 patients (65%) who believed that they had the total allergy syndrome fulfilled criteria for current or past mood, anxiety, or somatoform disorders, compared with only 28% of controls matched for age and sex.[10] Other diagnoses have been reported, including schizophrenia in patients with the total allergy syndrome,[9] the hyperventilation syndrome in patients with alleged food allergy,[7] anorexia nervosa in multiple food hypersensitivity,[11] and post traumatic stress disorder in patients with multiple chemical sensitivity.[12] A perusal of the vast self help literature yields descriptions of sufferers whose case histories raise the possibility of serious psychiatric illness.

But the exact role of psychiatric disorder remains to be established. Some researchers have not used standardised interviews or diagnostic criteria. Studies have included patients who agreed to some form of psychological assessment either through a liaison psychiatry service or for compensation claims. Controls have not been drawn from populations of similarly chronically ill patients hence such studies cannot answer questions about the direction of causality. A recent study that avoided these pitfalls, however, confirmed that whereas immunological abnormalities were notably absent, psychological symptoms were a central component of chemical sensitivity.[5]

Nevertheless, the high prevalence of psychiatric disorder suggests that psychological factors must be relevant. A history of psychiatric morbidity predating exposure to chemicals in the workplace and the onset of sensitivity to chemicals has been found to predict the development of multiple chemical sensitivity,[8] as has the number of prior medically unexplained symptoms.[5,8] Brodsky reviewed the medical records of eight patients with the total allergy syndrome and found that all had longstanding psychological problems and a history of somatic symptoms years before their exposure to offending substances at work.[13]

Psychiatric disorder and environmental illnesses overlap

The overlap between psychiatric disorder and environmental illnesses is unsurprising. Almost by definition, patients who claim multiple allergies suffer from multiple somatic symptoms that conventional medicine cannot explain. One of the strongest findings in psychiatric epidemiology is that the risk of psychiatric disorder increases linearly with the number of symptoms with which patients present.[14] In particular, many of those suffering from multiple unexplained symptoms beginning before the age of 30 also fulfil criteria for somatisation disorder (a chronic illness characterised by the tendency to express psychological distress through somatic symptoms).

The reasons why patients somatise is complex and not yet fully understood. Possible aetiological factors include the early experience of chronic illness in the family, overprotective parents, a tendency to introspection and symptom monitoring, associated psychiatric and personality disorders (accompanied by a reluctance to accept psychological distress), and environmental stresses.[15]

Simon *et al* suggest that patients with "allergies" may have an underlying trait of symptom amplification, rendering them sensitive to noxious stimuli.[8] A classic conditioning model of environmental illness complements this idea[16]: people who are exposed to toxic substances with an odour—for example, perfume, petrol, or smoke—and who, perhaps coincidentally, develop some physical symptoms may then by classic conditioning experience recurrent symptoms in response to other frequently encountered environmental substances with an odour. This simplistic model cannot, however, be relevant in

all cases, as it requires an odour, and patients are often sensitive to odourless substances.

Social factors may be important in the continuation of symptoms. A subculture seems to have developed around these "allergies"[9 17]: patients develop a lifestyle around their illness, with their own journals, clinics, and self help groups. This subculture may be psychologically important to patients for many reasons, such as legitimising distress, avoiding stigma, allowing escape from intolerable situations, and feeling understood. The medical profession, in contrast, has failed to recognise and respond to these patients' needs and anxieties or to acknowledge their suffering.

The media and popular culture are influential. Stewart has noted how a sample of patients with severe multiple unexplained symptoms had adopted many conditions publicised by the media.[18] Self diagnoses frequently changed between multiple chemical sensitivity, the total allergy syndrome, the chronic fatigue syndrome, candidiasis, and food allergy. More than a tenth had suffered from eight such diseases. Stewart considered that the particular self diagnosis owed much to attention in the media and fashion in diseases, but the underlying condition remained largely of psychological origin.[19]

Avoiding stigma

The tendency to blame symptoms on allergic causes is accentuated by the stigma our culture places on psychiatric illness. Inherent in the concept of allergy is the avoidance of any blame. Allergens exist outside us. Sufferers from allergies feel no guilt about their condition and are not subject to any moral sanction. On the other hand, many people regard psychiatric disorder as implying some personal culpability, however unfair or unjust that may be. Goldberg and Bridges have argued that avoiding blame is one of the main explanations of somatisation.[20]

Interpersonal factors may thus play a part on an individual level, but wide cultural factors are also important. These conditions, in which symptoms are claimed to result from such agencies as car fumes, petrochemicals, food additives, and electromagnetic radiation, can be seen in the context of the widespread concern in today's society about the state of the environment and the quality of the world we live in. These understandable fears, which many of us share, could lead people with unexplained symptoms to turn to the environment as a cause for their problems.[18] Chemical sensitivity, the total allergy syndrome and their variants reflect contemporary concerns—indeed, the total allergy syndrome is often called "twentieth century disease." It is often argued that such conditions are a direct consequence of changes in the physical quality of our environment—sometimes described by the word "overload."[21]

Sufferers from mysterious conditions that lie outside conventional medical practice no longer consider themselves to be oppressed by spirits and demons but by mystery gases, toxins, and viruses. This is particularly visible in the changing nature of mass hysteria.[22] Total allergy syndromes may be regarded as cultural syndromes afflicting modern developed societies, belonging alongside other culture bound syndromes. Improved understanding of these conditions may come not from immunology nor psychiatry but from medical anthropology, which carried out a still pertinent investigation of spontaneous hypoglycaemia,[23] a condition that overlaps with environmental illness.

Several reasons exist for concern about the increased prominence afforded environmental illness and clinical ecology. Treatment usually entails some form of avoidance of those substances or environments thought to precipitate symptoms. Progressive isolation from the normal environment may result, with the sufferers' lives becoming increasingly restricted. Simple and effective treatments for such conditions as depression and anxiety may be neglected. Whereas a diagnosis of allergy leads to avoidance, modern psychological treatments are usually based on exposure—replacing sensitisation with tolerance. If symptoms result from anxiety, panic, or phobia but patients are treated as if they are sensitive to some aspect of their environment the unintended result may be to reinforce maladaptive behaviour and perpetuate disability.

Even if further research is needed to establish aetiological mechanisms some advice can be given on management. Doctors should take patients' symptoms seriously. If questioning some of the patients' interpretations is necessary this must be done sensitively. Aggressive questioning of illness beliefs denigrates the sufferer's knowledge. It is easy to become an example of medical omnipotence and thus join the ranks of those doctors who have failed the sufferer.

If these conditions are partly iatrogenic in origin the blame may lie with both orthodox and unorthodox doctors. The best management at present depends on effective engagement with the distressed patient, conventional treatments for psychiatric disorder when relevant, and, above all, encouraging a progressive return to active life[5] rather than reinforcing social withdrawal and disability.

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