Psychosomatic Medicine Revisited

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In *Psychosomatic Medicine: Its Principles and Applications,* Franz Alexander argued that many physical illnesses were caused by psychological factors. He and others postulated that illnesses, such as asthma, ulcerative colitis, thyrotoxicosis, essential hypertension, rheumatoid arthritis, dermatitis, gastric ulcers, and cancer, were of psychiatric origin. Gastric ulcers have since proved more related to a bacterial infection and no data has appeared to demonstrate that maternal rejection caused asthma. Today, however, a vast and quickly expanding literature provides evidence for bidirectional physiological links between medical illness and psychological function. Depression is the area where such relationships have been best illuminated. This issue of *Primary Psychiatry* presents five views of the connections between depression and medical illness.

Thomas Stewart, MD, and colleagues, first survey developments, chiefly in the last decade, regarding the impact of depression on heart disease. Major depressive disorder (MDD) has emerged as a risk factor for the onset and progression of coronary artery disease. There are many biological and behavioral routes by which depression, its treatment, and heart disease may interact. These are the focus of much current research. Stewart and colleagues examine three of these possible mechanisms: the nitric oxide system, the platelet system, and the autonomic system. Depression may promote reactions useful in tissue injury but maladaptive in other contexts.

The incidence of depression is high in diabetes mellitus, and depression is a risk factor for the development of diabetes. Pooya Sabharwal, MD, and colleagues, discuss the evidence for this association, and then describe two mechanisms by which diabetes might induce depression. Evidence suggests that both type-1 and type-2 diabetes are inflammatory conditions accompanied by the secretion of cytokines, which may trigger mood change. Antibodies to glutamic acid decarboxylase, the synthetic enzyme for the brain's chief inhibitory transmitter, γ-aminobutyric acid, are common in type-1 diabetes. Such antibodies might affect the brain and produce depression. This also appears to occur in stiff person syndrome, a disease marked by the production of similar antibodies. The causality may run in the contrary direction: depression appears to be a major independent risk factor for type-2 diabetes, just as it is for heart disease. As the English physician Thomas Willis opined in 1674, “sadness, long grief, also convulsive affictions, and other inordinations and depressions of the animal spirits” may be causes of diabetes.

The hypothalamic-pituitary-adrenal (HPA) axis may be activated in both medical illness and depression, and may mediate causal influences between the two. John Michael Bostwick, MD, reviews the history of the dexamethasone suppression test in psychiatry. He discusses recent studies in which abnormal outcome of the test strongly predicted suicide, and considers mechanisms whereby the HPA axis affects behavior. A maladaptive neuroendocrine stress syndrome may link depression and physical disease, and lead to suicide.

Pro-inflammatory cytokines are part of the immune response to tumor. Large pharmacologic doses of cytokines, such as interferon-α, produce severe mood changes in humans, but whether physiological levels can affect mood is less clear. Studies in cancer patients suggest a connection between cytokines and fatigue. Julienne E. Bower, PhD, reviews what is known about fatigue in cancer. Correlations with behavioral measures are difficult to interpret in active cancer and its treatment. Preliminary results in recovered cancer patients show that cytokine activity may be more related to fatigue than depression. Such findings caution that the correlation of physiology and behavior may be complex.

Dan V. Iosifescu, MD, and Renerio Fraguas Jr, MD, PhD, review the literature on depression and medical illness. Depression is more common in the medically ill, and increasingly so as the total burden of illness increases. Unfortunately, depression seems to become more difficult to treat and more prone to relapse with increasing level of illness. Iosifescu and Fraguas summarize what is known about the treatment of depression in the medically ill, but also show the limitations of current knowledge about such treatment.

It is particularly appropriate to offer this information on depression and medical comorbidities now. Psychosomatic medicine is the newest board-certifiable specialty of psychiatry, with the first group of consultation-liaison psychiatrists taking board exams this summer. It is also the theme of the upcoming 158th annual meeting of the American Psychiatric Association in Atlanta, Georgia. This new field will concern itself with both the psychological and physiological relationships of mind and body, now with more specific evidence and theory. Psychosomatic medicine is back.

References