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The Murmuring Heart

That emotions can bring about bodily changes is familiar to anyone who has flushed with embarrassment, sweated with anxiety, or felt his heart pounding while physically at rest.

The heart and the "bowels" have always been linked with feelings, and we talk of "broken-hearted," "hard-hearted," "butterflies in the stomach," "he's got guts," and so on. But it probably remained at this level until William Beaumont[1] made the incidental observation that bile was regurgitated into Alexis St. Martin's stomach when he became angry. Since then investigations of the connexion between emotions and bodily changes have multiplied, and there are several journals devoted to the subject, but until fairly recently little emerged that the busy clinician could actually use in the course of his daily work.

Partly the findings were uncongenial to many medical men because they dealt with human feelings and relationships, and the paradoxes and ambiguities that these involve, but a more serious objection lay in the fact that many of the findings were expressed in psychoanalytic terms. These were not always understood, and the workers were often concerned to identify the type of personality prone to develop, say, coronary thrombosis or hypertension. Then there were difficulties arising out of the term psychosomatic disease. A list grew up of "psychosomatic diseases" in which psychological factors were judged to be important in the aetiology. This was fairly generally accepted, but not surprisingly many doctors assumed that diseases not on this list did not have psychological factors in their aetiology, and so a false approach to diseases was introduced.

Nowadays there is a growing body of empirical work from people with fewer theoretical assumptions who are conducting investigations in a way which could lead to results of practical value to their colleagues. Broadly these studies follow two lines: firstly, into the events in an individual's life (known as "life events") which antedate the onset of illness and which may have been so distressing or threatening to that person as to be of aetiological significance; and, secondly, into the psychological and social factors which surround any illness which may have a bearing on the patient's progress and prognosis. Examples of each type are published side by side in a recent number of the *Annals of Internal Medicine*.

L. V. Perlman and colleagues[2] conducted a prospective controlled survey of 105 patients admitted to hospital in congestive cardiac failure, and they found that "acute emotional events occurred in the 3 days preceding hospitalization" in 49% of them. Such events occurred in only 24% of the controls, who were in hospital for a variety of other conditions. The events seen most frequently were: violent arguments (14%), actual or threatened separation from family members (13%), anxious anticipation of some personal encounter (6%), sudden change or threat of change in routine circumstances (5%). Patients living with close relatives reported more emotional events than those living in institutions, and those who were satisfied with their living conditions reported fewer events than those who were not. These events were gross and were probably obvious to anyone who bothered to inquire about them. The investigating team contained a medical social worker but not apparently any psychiatrists.

More difficult to explain is just how these emotional events may have precipitated the congestive failure. The authors are not claiming more than that the events were significant in the precipitation of failure in people with pre-existing cardiovascular disease: 34 had "unknown heart disease", and 30 had coronary, 19 hypertensive, and 17 rheumatic heart disease. They recognized two types of situations that seemed to be important: rage and anger, and despair and depression. "Hemodynamic changes associated with anger may include increase in heart rate, with decreased cardiac filling time and increased peripheral resistance." And they cite other authors who found decreased sodium and water excretion during periods of despair, hopelessness, and discouragement. The precise mechanism by which psychological factors mediate physical changes in the body is obscure, so what these authors advance is not intended to be more than a hypothesis.

The second paper, and the second approach, takes us into a unit for intensive coronary care. N. H. Cassen and T. P. Hackett[3] were called in to give psychiatric advice on 145 (one-third) of 441 consecutive patients admitted to the unit. In addition they attended weekly

conferences with the unit nurses about the emotional problems that regularly arise in such places. They were consulted mainly on account of overt anxiety (47 times), depression (44), hostility (12), delirium (11). Patients with behaviour problems (30) included those who denied the seriousness of their illness and wanted to take their own discharge, sexually provocative behaviour, and those resentful about their dependent relationship with the staff. They found that numbers of patients referred to them for anxiety and denial were at their peak on the second day in the unit, while referrals for depression were at their maximum on the fourth day.

On the whole the psychiatrists were able to use fairly simple methods in dealing with these, psychiatrically speaking, straightforward situations. They prescribed tranquillizers; had frank discussions with the patients about the realities of their condition and future prospects, and bolstered optimism wherever possible; and they often recommended newspapers, radio, or sitting out in a chair. On one occasion one of the authors hypnotized an anxious patient over the telephone, but on the whole they were encouraging the patients, giving them an opportunity to express their anxieties, and reassuring the staff. The mortality of patients seen in consultation was one-third of that expected on the average, but no conclusions are drawn from this finding.

As with all investigations of this kind, the critic can say: That is very interesting but how does it help me treat my patient? In the second of these studies the answer is simple enough. An awareness of these factors—and that means being sensitive to the patient's feelings—can lead to simple preventive or remedial measures rather than waiting until there is a crisis in the ward. In the first paper, dealing with aetiological factors, the answer is not so clear. The kind of emotional events—rows and rejections—they found are not something a doctor can advise his patient to avoid. At best they will only be replaced by silent resentment, which may in the end be more damaging. Neither can bereavements or redundancy at work be deliberately avoided.

Rather a knowledge of antecedent events enables the doctor to reach a fuller understanding of his patient, something of the setting of the illness. Just as the heart is part of a human body, so the patient is part of a family and society, and a person cannot be understood without any reference to those others with whom he shares his life. Further, a knowledge of the background can help in assessing prognosis and planning future management. It may be possible as a result of the crisis (admission to hospital for cardiac failure) to bring about some changes in the physical and human environment. Social and psychological factors underlie all illness, and they are readily apparent to anyone who shows an interest in his patient as a person. They are also amenable to study, as was shown at a conference devoted to "Life Events and Psychosomatic Disorder" on 1-2 October organized by the Society for Psychosomatic Research at the Royal College of Physicians of London. A sensitivity to these psychological and social factors can enhance the quality of every doctor's work. And how does he begin? He listens to his patient.

[1] Beaumont, W., *Experience and Observations on the Gastric Juice and Physiology of Digestion*, ed. A. Combe. Edinburgh, Maclachlan and Stewart, 1838.
[2] Perlman, L. V., Ferguson, S., Bergum, K., Isenberg, E. L., and Hammarsten, J. F., *Annals of Internal Medicine*, 1971, 75, 1.
[3] Cassem, N. H., and Hackett, T. P., *Annals of Internal Medicine*, 1971, 75, 9.

Clarity and Confusion in Active Chronic Hepatitis

The results of the first controlled prospective trial of corticosteroid treatment for active chronic hepatitis in Great Britain, published recently by G. C. Cook, R. Mulligan, and Sheila Sherlock,[1] showed that it improved the likelihood of survival. The concentration of serum albumin rose during therapy, presumably because of an improvement in hepatic synthesis. The concentration of serum transaminase, though usually regarded as an index to hepatocellular necrosis, was found to be of no value in assessing the effectiveness of therapy, for it often fell towards normal without corticosteroids. The overall findings are in agreement with those of other recent reports, including one from the Mayo Clinic, and with the findings of the Copenhagen trial of steroid therapy for cirrhosis of the liver.[2] In the Copenhagen study, perhaps one of the best controlled trials yet to be carried out in liver disease, the sole criterion for admission was a histological diagnosis of cirrhosis. Of the 334 patients finally included the only ones to show a significantly lower mortality with steroid therapy were "young females without ascites," which is the group most likely to include patients with active chronic hepatitis.

But there are still many questions to be answered, and perhaps the greatest problem of all lies in the definition of active chronic hepatitis. To the practising clinician this brings to mind the picture of a patient, often an adolescent girl, who has been jaundiced for some months. The onset has usually been insidious, though it is occasionally acute and similar to that of infectious hepatitis. On investigation the patient is often found to have clinical or laboratory evidence of disease in other systems—skin lesions, arthropathy, ulcerative colitis, thyroid disease, fibrosing alveolitis, neuropathy, renal tubular acidosis, or Sjögren's syndrome, the last two being particularly common, with an incidence in some series of up to 40%.[3] Antinuclear factor and antibodies to smooth muscle are present in about half of the patients, but lupus erythematosus cells are not found as frequently as was initially described. A fairly consistent feature is hypergammaglobulinaemia, but the changes in standard liver function tests vary considerably. The criteria for inclusion in the Mayo clinic series included a ten-fold increase in serum transaminase and a two-fold increase in gamma globulin, but Cook and colleagues comment that if they had adopted the same criteria they would have had insufficient cases to undertake the trial.

Characteristic histological changes are also described. These include infiltration of the portal tracts by lymphocytes and plasma cells, with necrosis of the surrounding liver cells (so called "piece-meal necrosis"), together with fibrosis and distortion of lobular architecture. But confusion has arisen because the occurrence of such histological features in the absence of cirrhosis has been termed "chronic aggressive hepatitis."[4] Very occasionally chronic aggressive hepatitis can resolve, but usually, as was recognized by the group of pathologists who were concerned in this classification, the lesion is associated with the clinical features of active chronic hepatitis and progresses rapidly to cirrhosis. In fact at the time of diagnosis cirrhosis is frequently already present. This was so in the 35 of Cook and colleagues' 44 patients in whom histological material was available for assessment. It is to be noted also that from specimens ob-