The Irritable Bowel Syndrome
Back to Square One?

The publication in this issue of an article on the irritable bowel syndrome (IBS) by Whitehead, Engel, and Schuster (1) exemplifies the current revival of interest and the rising standards of research in that most common of all digestive tract disorders. Their paper describes new, additional physiological responses which characterize patients with this condition, and confirms and extends previously held views on their psychological traits. At the same time it raises once again basic issues regarding the true nature of IBS—in particular, whether it represents a qualitative or merely a quantitative departure from the physiological reactions of healthy persons.

The present study is noteworthy for its experimental design. In each aspect of functioning, the IBS patients were compared with normal controls. The severity of their symptoms was independently rated by a "blinded" investigator. The findings were shown to be consistent in test-retest studies, and the results were analyzed by rigorous statistical methods. Sophisticated use was made of "objective" psychological tests, and correlations were sought between physiological and psychological variables. The close collaboration between clinical physiologists and experimental psychologists is a rarity to be admired: Among the hundreds of abstracts submitted for the programs of Digestive Disease Week in 1979, the writer could find only two that drew any of their substance from behavioral science. This imbalance between the natural and the behavioral sciences has long limited the effectiveness of gastrointestinal research, and the Johns Hopkins group shows us that it can be corrected.

This could be a most opportune time to examine the correlations between somatic and psychological functioning, in view of a developing consensus on the physiological definition of the IBS. A characteristic pattern of myoelectrical activity of the distal colon, involving predominance of slower, 3-per-minute cycling, was reported by Snape and coworkers (2), and has been confirmed by Taylor et al (3, 4) and Latimer et al (5). This pattern is detectable in the unstimulated gut (2) and persists despite abatement of symptoms (4). It is not found in patients with pain or bowel irregularity due to other digestive disorders (3). It is of interest that the most consistent motor abnormality found in IBS patients by Whitehead and his associates was the repetitive contraction of the rectosigmoid area, at about the same frequency, in response to sudden distension of the bowel. Neither these myoelectrical phenomena nor these pressure responses were observed in "normal" controls, but are they distinctive for the irritable bowel syndrome? Do they distinguish IBS patients from others with similar psychological traits? Latimer (5) would deny this, as he found the same 3 cycles-per-minute myoelectrical activity in 7 of 8 controls who, although lacking any evidence of IBS, had comparable psychoneurotic traits. As no other studies of motility have yet included a psychoneurotic control group, and as several investigators have reported a high frequency of psychoneurotic traits among clinic patients with IBS, the true significance of these motor phenomena deserves further study.

Another source of uneasiness about the idea of physiological traits distinctive for IBS patients is the much larger population of individuals with identical symptoms who never consult a physician. If one includes in this population those with transitory malfunctions of the gut in anticipation of military
action or a new job or qualifying examinations, the universe of individuals may be a majority of mankind. Many would agree that the distribution of frequency and severity of their symptoms overlaps that of patients with IBS. Whether such an individual does or not become a patient may be determined by the availability of health services, family experience with digestive disease, or other social factors which encourage "illness behavior" (6). Just as patients diagnosed as psychoneurotic in mental health facilities are greatly outnumbered by those found to have such a disorder in population surveys (7), IBS patients are probably a small subset of the population so affected. Is the silent majority of those with bowel dysfunction also recognizable by the same physiological criteria?

Whitehead and his colleagues addressed themselves to another troublesome question: Why do some patients with IBS consistently report constipation and abdominal pain, others persistent diarrhea, and still others experience both symptom complexes in irregular or alternating fashion? In common with previous workers, they found no significant differences among these groups in measurable traits of personality. To date the patterns of myoelectrical activity (2, 3, 5) have not distinguished these subgroups from each other. In the present report the frequency of "slow contractions" offered no basis for identifying these groups. The higher level of the motility index and the higher frequency of "fast contractions" in patients with diarrhea responding to intraluminal distension are difficult to reconcile with many previous reports of abnormally low levels of spontaneous motility in such patients. But is it likely that these symptom complexes would be principally determined by fixed qualitative characteristics of personality or control mechanisms, when they can appear in quick succession in the same individual?

It may still be fruitful to consider the similarities as well as the differences between the reactions of IBS patients and those of the general population. Their resting patterns of motility, as measured by pressure and volume recorders, have not been distinguishable from each other. In both groups motility can be augmented at times of emotional tension, and when closely monitored, the temporal correlation between changes in affect and changes in motility can be very precise (8). Even the man in the street finds indices of emotion in his neighbor's sudden onset of sweating, blushing, or weeping, regardless of that person's underlying personality structure. In many individuals, disturbances of bowel function are similar indices, albeit invisible to their neighbors.

In this view of the IBS, functional change in the bowel correlates most closely with the ongoing emotional state. The patient differs from the "normal" person chiefly in the frequency and severity of his visceral responses, and these are related in turn to the magnitude of life changes, his attitudes toward them, and his preoccupation with intestinal function. Furthermore, in an earlier study it was suggested that different emotional colorings may reflect differing patterns of colonic motility: By conventional interpretations of speech, gesture, and other observable behavior in patients whose sigmoid motility was being recorded, it was noted that "coping" reactions were usually associated with heightened contractions of the colon, and "helpless" or "giving-up" behavior with subnormal motility (9). In more than 100 subjects, all of the eleven instances of spontaneous weeping occurred during (often quite transitory) periods of reduced phasic motility (10). The phenomena observed in the laboratory, together with the clinical histories of constipation and/or diarrhea in these patients, were wholly compatible with our present concept of "paradoxical motility" of the distal colon. The transient character of these motility disturbances and their close linkage with concurrent affective states seemed highly compatible with the variations seen in the symptomatic expression and the natural history of IBS. Such a formulation also accommodates the diversity of personality characteristics found in these patients, our difficulty in perceiving fixed differences between those with constipation and those with diarrhea, and the indistinct margin between health and illness with respect to this syndrome.

The choice between these two concepts—the "epilepsy" model and the "weeping" model—is of more than theoretical interest. If the IBS can be securely recognized in an individual at any time (whether or not he then has symptoms) by his pattern of myoelectrical activity or other indication of dysrhythmia, and if the predictive values of both positive and negative findings are both satisfactory, we will have gained a firm foothold on a slippery slope. IBS will cease to be a diagnosis of exclusion and will be recognized and treated in a manner analogous to idiopathic epilepsy. The wide range of "trigger" phenomena will not need to be studied for their psychological significance, and attention can be concentrated on metabolic or pharmacological