# PSYCHOLOGICAL ASPECTS OF GASTROINTESTINAL DISORDERS

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# Psychological Aspects of Gastrointestinal Disorders[1]

## Introduction

This chapter is intended to summarize the present status of our knowledge with respect to the interrelationships of psychic and somatic processes as they affect gastrointestinal activity. Furthermore, it offers a clinical classification of the varieties of gastrointestinal disturbances which may result directly or indirectly from psychological influences.

Historically, there have been two major approaches to psychosomatic research. The psychoanalytic approach, exemplified by the work of Franz Alexander, by elucidating the nature of unconscious mental processes, identified specific psychodynamic tendencies that are intimately related to gastrointestinal activity in a developmental as well as functional sense. While such data originated in the course of the psychoanalytic treatment of neurotics and led to the now familiar concepts of the oral and anal phases of psychosexual development, the application of the same method to patients with gastrointestinal disorders served to highlight more explicit etiological relationships between such unconscious psychodynamic influences and gastrointestinal symptoms (see references 7, 20, 94, 96, and 158). Furthermore, psychoanalytic theory and method have made the development

of other techniques possible, such as the various projective and other testing instruments of the clinical psychologist, whereby the unconscious psychic processes can be identified and studied.

During the same period, Harold Wolff, Stewart Wolf, and others at Cornell University approached the problem through direct observation and measurement of physiological change in the exposed gut of fistulous subjects and related these changes to concomitant psychological states. These correlative psychophysiological and biochemical studies have provided a basis for delineating the somatic parameters more precisely in terms which can be related to concurrent psychological and behavioral variables. Some efforts have been made to combine the two approaches, that is, to make physiological or biochemical measurements in the course of psychoanalysis, but these have involved such technical and theoretical difficulties as to seriously limit the value of the results so obtained. In addition to these approaches, careful clinical—-including epidemiological—studies of individuals and populations of patients correlating the course of disease with psychological and social factors, continue to be an indispensable source of new knowledge in this area. Less distinction between the approaches is made today than two decades ago, and the student of gastrointestinal disorders draws upon multiple perspectives and overlapping approaches.

## Specific Relationships Between Psychological Processes and the

## Gastrointestinal Tract

The most significant contribution of psychoanalysis to gastroenterology was the demonstration of the role of feeding and elimination in the psychological and social development of the child. The relevant points may be summarized as follows:

The newborn infant's cycle of hunger→ crying → nursing → satiation → sleep → hunger→ and so on, constitutes an important, biological influence regulating the first establishment of a relationship between the neonate and its mother. In the course of mounting hunger and then nursing, the infant periodically achieves relief of tension in the mother's arms, laying the basis for the ultimate association in the nervous system of an intrinsic drive (hunger) and its relief through an environmental influence (mother). This is a reciprocal process, the mother being required to recognize and respond appropriately to the infant's cues indicating hunger and the infant being required to fit into the mother's particular patterns of nursing. If successful, it is a source of mutual gratification; if unsuccessful, it becomes a source of tension and frustration for both infant and mother. The consequence of this dependence on the feeding cycle for the psychobiological unit of mother and child is that for the infant many of the first learning experiences, i.e., the first awareness of the mother as part of an outer environment, and the early associations of comfort and discomfort, may be experienced in the oral

intaking terms of the nursing experience. This is responsible for the fact that one prominent psychological perspective of the young infant is an oral one, namely, that which is perceived as good or desirable is taken in, while that which is felt as bad is spit out or refused. Evident in infancy in such literal behavioral terms as mouthing, sucking, and tasting everything in reach, this is also manifest in later life as a general psychodynamic tendency which is capable of influencing the content of thought and the nature of behavior, if not the actual activity of the gastrointestinal tract itself. This is revealed in the oral mannerisms of sucking, mouthing, and chewing pencils, pipes, cigarettes, knuckles, gum, and what not, in such familiar oral terms of endearment and pleasure as "How sweet!", "I could eat you up," or of displeasure (distaste!) as, "You make me sick (to my stomach)," "I can't stomach that," as well as in the language used to designate certain personality traits, as "sour," "greedy," "sweet," etc. In a broader context, the feeding experiences of infancy also provide a nidus around which may cluster a whole complex of associations related to such fundamental human needs as to be taken care of, supported, and nurtured, the so-called dependency needs, and hence the classical psychodynamic association, "oral-dependent."

With the eruption of teeth and the transition from sucking to chewing comes another contribution of a body activity to psychic development, namely, the expression of aggression and hostility in oral terms, namely, biting, tearing, and even consuming cannibalistically. Again, human behavior

and language amply attest to the universality of such psychodynamic tendencies. “Gnashing the teeth,” or “clenching the jaw with rage,” or “biting sarcasm” (from the Greek, “sarkazo,” to tear flesh), and many other expressions may be cited. Characteristically, the thwarting of oral needs, literally or figuratively, may elicit aggressive impulses, to take by force that which is not given, or to force the others to give, expressed literally by the child (and symbolically by the adult) through grabbing, tearing, biting, or holding firmly with the teeth. Greed, envy, possessiveness, spite, bitterness, sarcasm, vindictiveness, all are words that convey such oral aggressive meaning.

Since the infant cannot survive or develop without food and cannot feed in the absence of a nurturing person (mother), it is clear that these oral-dependent and oral-aggressive tendencies must be present and operative in all individuals. But what originally was essential for survival, eventually loses such imperative qualities and the associated patterns of behavior must give way to other patterns more acceptable to society. Critical for the course of such developmental achievements are the strength or the driving quality of the original feeding impulses, the degree to which the mother succeeds or fails in gratifying the primary oral needs, the range of other biological and psychological gratifications that are available to or provided for the developing infant, and the environment’s standards and expectations as to manner, degree, and circumstance of oral expression and behavior (the

interpersonal and social forces). The child in time internalizes these external demands, expectations, and standards and he learns, so to speak, the conditions under which he can prosper and be loved and those under which he is frustrated or rejected. In brief, through the processes of socialization he not only learns that the reality of his particular life situation requires compromises, delays, and the weighing of the consequences of his wishes, impulses, and acts, but in so doing he is repeatedly subject to intrapsychic as well as interpersonal conflict.

The presence of a legacy of past as well as of current conflict is a fact of psychic life. It is a fundamental premise of psychoanalysis that those psychodynamic tendencies which must be denied expression for any reason, may nonetheless continue as unconscious forces to exert an influence on mentation and behavior, an influence which may be reflected in various bits of derived behavior, including changes in gastrointestinal function. It is assumed that unconscious oral-dependent or oral-aggressive impulses, if not successfully gratified by psychological or social devices may be accompanied by physiological changes in the stomach appropriate to preparing to take food into the stomach. Evidence that such indeed is the case in infancy, when affection and aggression are literally expressed in oral terms, is found in the results of a study of concomitant behavior and gastric secretion in a fifteen to eighteen-month-old infant with a gastric fistula. When this baby was relating to a familiar experimenter either with affection and pleasure or with rage, the

rate of hydrochloric acid secretion by the stomach was high. On the other hand, when the experimenter was a stranger from whom she typically withdrew and whom she ignored completely, becoming totally inactive, sometimes to the point of falling asleep, the secretion of gastric acid virtually ceased, even remaining unresponsive to histamine. When the familiar experimenter reappeared, she characteristically exhibited signs of exuberant joyful recognition, and a copious secretion of gastric juice ensued. The maximum rates of acid secretion during a sustained joyfully affectionate relationship, or during intense rage approached those observed during sham feeding. In brief, this study appeared to establish that at the level of development characteristic of this child (actually closer to ten to twelve months in development than to her chronologic age of fifteen to eighteen months) active relating patterns, whether affectionate or hostile, were accompanied by the increments in gastric secretion comparable to what occurred when the stomach was preparing to receive food; in the absence of both food and meaningful human relationship, stomach activity virtually ceased. Similar findings have been reported in a pair of twins a year and a half old, one with a gastric fistula and the other normal.

Comparable psychophysiological studies of a four-year-old child demonstrated the dissociation between behavior and gastric secretion that takes place upon the development of more sophisticated mental means of relating and communicating, including language. This child showed a low

basal level of secretion of acid and pepsin when she was relating comfortably and happily with the experimenter withdrawing gastric juice. This contrasts with the high secretion found in the younger infant under such circumstances. On the other hand, when the four-year-old had to make an effort to relate, as with a new experimenter, gastric secretion rose, as it did also when she was angry or anxious. Secretion was low when she became detached or withdrawn.

Studies of adults with a gastric fistula also indicate rise in gastric secretion during rage, both expressed and suppressed, and a fall during dejection and withdrawal. Depression and "giving up" experimentally induced through hypnosis in adult volunteers also has been found to be associated with a decline in the rate of gastric acid secretion.

Like feeding, elimination constitutes another physiological pattern, the development and control of which eventually involves a reciprocal relationship between mother and child. In earliest infancy defecation is controlled by an innate reflex which automatically empties the bowel when it reaches a critical degree of fullness. Presumably the infant has no psychic engagement in this process other than in terms of what pleasant or unpleasant sensations may accompany such peristaltic activity. However, toward the end of the first year and for a variable period thereafter, most infants not only appear to experience pleasure in the act of defecation but

may also come to regard their feces with interest, if not decided pleasure. Certainly they manifest no disgust. Ultimately, however, the child must learn to control defecation and restrict his pleasure in feces in a manner prescribed by the child-rearing practices of his particular group, which may range from highly exacting to excessively lenient. Ultimately feces become objects of loathing and disgust, though this attitude is more pronounced toward another's bowel movements than one's own. This constitutes another important reciprocal relation between mother and child that is geared closely to an intrinsic biological rhythm in the child. To aid her child to achieve bowel control, the mother must learn the physiological cues that the child emits and which indicate his readiness to defecate, while the child must learn from the mother's response that his physiologically derived sensations call for a specific toileting action. As with nursing, this reciprocal situation is mutually gratifying when successful but fraught with complications when mother or infant fail to respond properly to each other. The latter incompatibility may range from the mother who misses all the cues and fails to put the baby on the pot to the mother who interprets the wrong cues and puts the baby on the pot at the wrong times. The tensions which may develop between mother and child with such stressful learning failures constitute the basis for explicit psychophysiological relationships between behavior on the one hand and variations in bowel activity on the other. In addition, the failure to resolve successfully the inevitable incompatibility between the wishes to enjoy feces

and the bowel movement, and the necessity to conform to parental requirements may perpetuate such underlying psychodynamic pressures and exert a distinctive influence on personality development, contributing to the development of the so-called “anal traits” of exaggerated orderliness, perfectionism, punctuality, and pedantry. These are seen as defenses against a persistent unconscious wish to be free to soil. Once again, the persistence of unconscious psychodynamic tendencies must be emphasized, exerting an influence on mentation and behavior, and sometimes on bowel function as well. As will be discussed later, bowel symptoms are common in persons with these characteristics, called “anal” in psychoanalytic terminology.

The utilization of concepts of bowel activity as a vehicle for the expression of aggression is amply attested to by familiar anal and fecal swear words and gestures. Increased physiologic activity of lower bowel has been noted during expression of anger in fistula subjects.

By virtue of the pleasurable sensations which originate during sucking, eating, and defecation, and the intimate role of feeding and excremental activities in the development of affectual relationships, it should not be surprising that both ends of the gastrointestinal tract are capable of being endowed by the child with sexual meaning. Concepts of oral or anal intercourse and oral or anal pregnancy and birth are a common part of the fantasy life or misinterpretation of children. How such ideas, when

unresolved, may serve to provoke gastrointestinal symptoms, will be discussed later[2].

## Classification of Psychological Phenomena in Relation to the Gastrointestinal Tract

### Psychogenic Disorders

These include two groups of disorders. One refers explicitly to symptoms ascribed by the patient to the abdomen or gastrointestinal tract which, in fact, constitute psychic phenomena involving intrapsychic representations of gastrointestinal function and process. In such disorders, the gastrointestinal tract per se either is not primarily involved, or is responding in a normal manner to a stimulus, as for example, nausea or vomiting in response to a disgusting idea. Within this category are conversion reactions, somatic delusions, and hypochondriacal phenomena.

The second group comprises bizarre and inappropriate patterns of feeding or elimination which represent either inadequate or undifferentiated behavior patterns and/or are the logical consequences of bizarre (psychotic) ideation. These include anorexia nervosa, pica, food faddism, encopresis, psychogenic megacolon, compulsive use of laxatives or enemas, and other bizarre feeding or bowel behavior. Some persons in this group are psychotic.

### Psychophysiological Disorders

These involve mainly the physiological concomitants of affects, e.g., rage, anxiety, shame, guilt, etc. The involvement of the gastrointestinal tract may be direct, through its innervations, or indirect, through other general physiological or biochemical processes. Important here is that in the presence of preexisting organic vulnerabilities or latent defects such physiological or biochemical processes may serve to precipitate manifest organic disease.

### Somatopsychic-Psychosomatic Disorders

These are organic disorders, the predisposing conditions for which not only are present or acquired early in infancy but also have influenced psychological development in specific ways. Such disorders may become manifest any time in life but the individual bearing the predisposing biological factor, though always vulnerable, will only develop the manifest disorder if certain environmental—including psychological—stresses occur. Included in this category are the conditions classically considered in the past as psychosomatic, i.e., duodenal ulcer and ulcerative colitis, as well as others such as coeliac (malabsorption) syndrome, regional enteritis, and achalasia.

## Psychogenic Disorders

The psychogenic disorders contribute disproportionately to the number

of patients presenting with complaints presumably originating from the gastrointestinal tract. Anorexia, bulimia, nausea, vomiting, dysphagia, abdominal pain, bloating, aerophagia, rectal incontinence, diarrhea, constipation, and pruritus ani all are symptoms which may be psychogenic in origin rather than the consequences of intrinsic disorder of the gastrointestinal system. Before discussing specific syndromes and symptoms, however, it is necessary to elucidate some underlying psychic mechanisms, including conversion and delusion, and to relate these to the syndromes of hysteria, hypochondriasis, and schizophrenia.

## Conversion Reactions

Conversion reactions comprise a major category of psychogenic disturbances, experienced or manifested in somatic terms. As a psychological process, conversion represents a means of dealing with stress which makes use of the fact that it is possible to express ideas symbolically through body activities or sensations. The gesture is a familiar example of how a body movement may be used to communicate an idea or a wish and to relieve tension. The typical conversion reaction, however, occurs when the wish, idea, or fantasy in question not only cannot be consciously expressed, but cannot even be consciously acknowledged. Under such circumstances the idea may achieve expression in the form of a sensation or a body activity which symbolically represents the idea in question, and yet at the same time

effectively prevents it from being acted upon. As a means of dealing with psychological stress and resolving intrapsychic conflict, such symbolic use of the body replaces both acting on the wish and consciously entertaining it as a thought or fantasy, both of which are felt as threatening. By this means, psychological compensation is maintained although at the expense of some abnormal utilization of the body part selected for this purpose. The result is a somatic symptom based on psychological misuse of the body part, not on disease of the part so involved. Physical examination, therefore, demonstrates no organic defect directly related to the symptom.

The common conversion reactions involve a great variety of body parts and functions, all of which share the following: (1) they are accessible to voluntary control (motor) or awareness (sensation); (2) they had been involved in some way in human relationships in the course of development; and (3) they are capable of being imagined in the form of some concepts of the body image or a function thereof. Each conversion manifestation characteristically is overdetermined, meaning that multiple factors are involved in determining the choice of the particular bodily expression used. The expression which proves to be the most satisfactory psychologically is the one which can most economically symbolize these multiple determinants.

We may best illustrate conversion by a hypothetical example. As pointed out earlier, circumstances may encourage some children excessively

to endow the act of eating or swallowing with sexual or aggressive fantasies or wishes which then become a source of conflict. When later in life some provoking circumstance serves to activate such an unconscious impulse, as, for example, the equating of the act of eating with an infantile primitive wish to bite aggressively or to use the mouth for sexual purposes, the conflict evoked may serve to block the impulse from coming to consciousness as a thought or a wish, as well as prevent the overt act. Instead, it may appear in its symbolic form as a conversion symptom, as anorexia, dysphagia, nausea, vomiting, or pain. In such a case the disturbing wish or fear, namely, to bite, to perform fellatio, to be bitten or be sucked on, has been effectively disposed of and has been "converted" to a bodily activity which symbolically means, "I can't eat (swallow)," or "I throw up what I swallow." This forms one basis for such conversion symptoms as anorexia, dysphagia, nausea, or vomiting. Such an inhibition of the processes of eating, swallowing, or retaining that swallowed is a symbolic substitute for the forbidden idea, an idea which in fact had originally related not to food in its literal sense but rather to some unacceptable sexual or aggressive wish which, in the course of development, acquired a link to the act of eating or swallowing. The person so afflicted not only keeps the forbidden idea from conscious awareness by literally not eating, swallowing, or retaining, but he also broadcasts to the world that he does not take anything into his mouth; when he does do so, he has difficulty swallowing it or he regurgitates it. In this symptomatic act the disturbing

motivation is contained as “I wish to bite, to take the penis in the mouth, to swallow the loved (or hated) person,” etc., implementation of which is blocked. Thus he simultaneously expresses the wish symbolically, yet makes it impossible for the wish to be acted upon.

How the conversion is experienced by the patient and communicated to others is in part determined by the characteristics of the society in which the patient lives and in part by the nature of his thought processes and capacity for reality testing. “Styles” of conversion reactions change with changing times and attitudes, so that certain patterns common in a past generation now are rare. The Victorian swoon is a good example. Modern health and medical consciousness contributor to a tendency to manifest conversion symptoms in keeping with the popular concepts of what physicians expect of physically sick patients. The more capable the patient is of retaining accurate reality orientation, the more likely will the conversion symptom be communicated in such terms. In contrast, the psychotic patient whose thought processes and reality capacities are defective is more likely to experience and communicate conversion symptoms in bizarre terms, approaching true somatic delusions, and to offer bizarre explanations for the symptoms.

The positive identification of a bodily symptom as a conversion reaction requires considerable diagnostic skill. The common practice of depending

solely upon the ruling out of organic factors as the means of diagnosing conversion is hazardous. Not only may some organic defects be extremely difficult to demonstrate but also conversion symptoms and organic processes may coexist. *In the absence of positive psychological criteria, conversion cannot be invoked as the explanation of a symptom, even when all other data indicating organic defect are negative.*

The conversion symptom always has its sources in the history of the individual's past human relationships and in the types of bodily activities or experiences which had been involved in the gratifications and conflicts that marked these relationships. A skillfully conducted interview is the keystone to the diagnosis of conversion.

Conversion reactions may occur under a wide variety of stressful circumstances and in persons of the most varied psychological characteristics, from the essentially healthy individual to the psychotic. They are most common in and characteristic of *hysteria,* a condition in which there is a predilection toward use of the body for expression of feelings, wishes, and ideas. But it is not correct to assume that conversion reactions occur only among hysterics.

A less common syndrome than hysteria is *hypochondriasis,* marked by the occurrence of unpleasant bodily sensations, as itch, formication, crawling,

pulling, fullness, pain, and other peculiar sensations or by the persistent idea of the presence of an organic disease, as cancer, tuberculosis, syphilis, etc. The latter represent disturbed ideas but may include as well symptoms related to the disease in question, as, for example, fullness, bloating, anorexia, etc., associated with the idea of stomach cancer. Hypochondriacal symptoms characteristically have an insistent, demanding, nagging, torturing, and even persecuting quality and are the source of great distress to the patient, who pleads for relief. They involve especially the skin, abdomen, nose, rectum, and genitals. Peculiar and persistent sensations in the rectum are especially characteristic. At times hypochondriacal symptoms assume the quality of somatic delusions. Thus, the patient may experience or interpret sensations to mean that something is growing inside, that his insides are rotting away, that a body part is changing shape, that bugs are crawling under the skin, etc.

Specific gastrointestinal conversion symptoms have their origins in the psychodynamic factors discussed earlier. They include the whole range of oral and anal, aggressive and sexual fantasies of which the child is capable. Thus anorexia, bulimia, hypophagia, nausea, vomiting, and bloating may relate to conflicts over unacceptable wishes to be nursed like a baby, to bite or swallow aggressively, to use the mouth for sexual purposes, concepts of oral pregnancy or birth, and many others.

Some general clinical characteristics of individual conversion symptoms

that are manifest as gastrointestinal symptoms follow.

### *Anorexia*

As a conversion symptom, anorexia is likely to be described in complex terms and to be expressed as an active distaste for food, or dislike of eating rather than merely as an absence of appetite. It may be directed toward certain foods and not others, especially foods capable of symbolic meaning, such as liquid egg white, scum on milk, rare meat, etc. There may be a preference for "baby" foods. It may occur only in certain settings or with certain people and be totally absent at other times or under different circumstances. Occasionally the complaint of anorexia does not correspond with the observed nutritional status, the patient maintaining or even gaining weight by virtue of eating more than he realizes. Appetite may be present, even ravenous, only to disappear upon the sight or odor of food, or at the time when meals are served, returning when the meal is over.

### *Bulimia*

Certain types of sporadic overeating, often followed by self-induced vomiting, may be regarded as conversion reactions. In these cases the act of gorging, the manner of biting, chewing, and swallowing the food, and even the choice of food so consumed are determined by their symbolic defensive function in dealing with threatening aggressive or sexual wishes. The

induction of vomiting sometimes represents an attempt to undo the symbolic act.

### *Dry Mouth, Burning or Painful Tongue*

Such symptoms are occasionally brought about through the conversion mechanisms. On examination mouth moisture is seen to be ample and no changes in the tongue are evident. Such a sensation of dry mouth may symbolize fear or may be a defense against an oral sexual wish. The conversion symptom, burning tongue, may reflect a conflict either about the use of the tongue in speaking, such as to utter burning, sharp, or acid words of attack, or about its use as a sexual organ. The common expression, to be "burnt" refers to being caught and hurt or punished for committing a forbidden act. Pain in the tongue may reflect symbolically the notion "I will bite my tongue rather than say that."

### *Nausea and Vomiting*

As conversion symptoms these share many of the characteristics already described for anorexia. The symptom may be unrelated to eating, and may either precede or follow food intake. The vomiting may be relatively unproductive, yielding only mucus or a small amount of bile-stained gastric juice. Retching and gagging may be prominent, at times occurring merely on the sight of food or when food enters the mouth or posterior pharynx. Food

may be taken into the mouth gingerly, in small morsels, and kept in the forepart of the mouth for a long time, the act of swallowing evoking a gag. Morning nausea, gagging, and vomiting may indicate unconscious pregnancy fantasies in men as well as women. Similar symptoms at night may reflect an unconscious wish for or fear of an oral sexual experience.

### *Dysphagia*

The idea as well as the act of swallowing is discomforting. It may include the feeling that the food cannot be taken into the mouth, cannot be passed into the pharynx, and, if it is swallowed, that it will stick in the gullet. Observed eating, the patient may pucker his face, chew very slowly and gingerly, keep the bolus in the forepart of the mouth, and act as if it is very difficult to move it into the vault. Indeed, he may spit it out. Here an inhibition of the volitional part of swallowing is quite evident. Food is experienced as sticking high in the gullet. The difficulty in swallowing may be restricted to particular items of food or may include everything swallowed, liquid as well as solid. Conversion dysphagia may involve all consistencies of food rather than showing the usual progression of difficulty, from solid to soft, and then liquid that is more characteristic of organic obstructions. Achalasia is classified as a somatopsychic-psychosomatic disorder and will be discussed later.

### *Globus Hystericus*

This conversion reaction, a sensation of a lump in the throat usually at the suprasternal notch, is unrelated to eating and usually does not interfere with swallowing, though the patient may fear that it will.

### *Abdominal Bloating*

This term covers a number of entities. Some patients complain that the abdomen is enlarged, but this is not confirmed upon examination. This false perception of abdominal distention usually is accompanied by unpleasant abdominal sensations, sometimes specified as gurgling or movement and sometimes interpreted by the patient as indicating a cancer. Complaints of belching, flatus, and indigestion are common. Such persons are usually blatantly hysterical or hypochondriacal. Evidence for an underlying pregnancy fantasy is usually not hard to come by.

The second type is called nongaseous abdominal bloating and is produced by simultaneously thrusting the lumbar spine forward and relaxing the abdominal musculature. The lumbar lordosis is often so great that the hand may easily be passed beneath the spine of the reclining patient. This type of muscular bloating typically appears and disappears rapidly, often within seconds. It characteristically disappears during sleep. These patients, almost always women, also are obviously hysterical, with unconscious

pregnancy fantasies, intense longing to be pregnant, or actual delusions of pregnancy.

Air swallowing (aerophagia) is a third mechanism of bloating and will be discussed under Psychophysiological Disorders.

### *Constipation and Diarrhea*

As conversion symptoms these are concerned mainly with that segment of lower bowel which is under more or less voluntary control. Conversion constipation is secondary to an inhibition of the act of defecation rather than to an intrinsic disturbance in bowel motility, though the latter may develop in time as well. The history generally will reveal considerable variability in bowel behavior, with an inability to defecate at certain times or in certain settings, as in strange and unclean bathrooms, in the presence of others, etc. Its sporadic appearance may be correlated with the threatening emergence of anal soiling or sexual impulse.

Diarrhea as a conversion symptom most often consists merely of the complaint of several stools a day, but these are usually relatively formed. It is uncertain whether true diarrheal stools ever result from a conversion mechanism.

### *Pruritus Ani*

As a conversion reaction, this symptom is more common among men than women (who are more likely to complain of pruritus vulvae). It rather typically reflects unconscious erotic anal fantasies, including a wish for anal masturbation. In some instances the unconscious latent homosexual implications contribute to a paranoid attitude, a fear of anal attack, or the delusion that another man threatens such an attack. The existence of such paranoid tendencies must always be carefully searched for before the male patient with pruritus ani is subjected to rectal examination or proctoscopy.

### *Pain*

Probably the most common conversion symptom encountered in medical practice is pain. Conversion pain may be experienced in any part of the body and therefore must be distinguished from pain that indicates organic disorder. The topic of pain is treated fully in Chapter 34 of this volume.

In differentiating conversion pain from pain of other origin, it is necessary to explore the patient's background not only for the specific psychodynamic factors which are especially conducive for the choice of pain, rather than some other symptom, but also to determine that it is in fact conversion pain. A careful description of the pain is of high importance in differentiating the two varieties of pain. In general, the conversion pain

differs from the pain of a discrete organic process in respect to its quality, timing, location, radiation, and the nature of the provoking and alleviating factors. The latter reflect the characteristics of the neural input as determined by the pathophysiological processes at the periphery and confer upon the pain experience those distinctive qualities which enable one to differentiate the pain of biliary colic, for example, from that of peptic ulcer. This may be referred to as "the peripheral signature" and it is the deviation from such discrete patterns which usually first alerts the physician to the possibility that the pain is not originating from a peripheral site. Occasionally, however, the patient with a conversion pain, having been subjected to pointed and directive interview experiences, may present a description indistinguishable from some classical organic syndrome. The same may hold true of the patient whose conversion pain actually was preceded by some painful illness, as biliary colic or duodenal ulcer, or of the patient who has an intimate knowledge of such syndromes through close contact with another patient, or through the familiarity that results when the patient is a physician or nurse. Ordinarily, conversion pain is described either with vivid imagery or very vaguely. Such complex pain descriptions as "burning like a fire," "like being stabbed with a knife," "like being tied in a knot," "wrung like a mop," reflect the idiosyncratic psychological meaning of the pain to the sufferer and are of value in suggesting the diagnosis.

## Disorders of Eating and Elimination Secondary to Psychopathological States

There are a variety of patients who exhibit inappropriate or bizarre patterns of eating or elimination which are secondary to psycho-pathological states. These differ from conversion reactions as described above in that they represent more complex disturbances in the behavior associated with eating and elimination rather than involving the use of a body part or function in a symbolic and defensive manner. Such disturbances may range from inadequate or undifferentiated eating or elimination behavior to behavior which is determined by bizarre (psychotic) ideation but is logical in the framework of that ideation though inappropriate or strange by ordinary standards. For the most part, this group of patients make themselves evident by the obvious peculiarity of their ideas about or manner of eating or moving their bowels, though these may easily be overlooked if the examining physician neglects to obtain a precise description of these acts or to explore the patient's explanation for his complaint of "no appetite," "sick to the stomach," "constipation," or "diarrhea."

**Anorexia Nervosa**

Typically a disorder of young people, usually beginning during adolescence, and far more common among girls than boys, anorexia nervosa generally presents as profound weight loss and emaciation secondary to a failure to eat. This syndrome is described fully in Chapter 32 of this volume.

## Pica, Food Faddisms, and Other Peculiar Dietary Habits; Laxative and Enema Addiction

This group ranges from children (and a rare adult) who exhibit a defect or perversion in the ability to discriminate the edible from the inedible to persons whose food habits are determined by bizarre or peculiar modes of thinking. As a whole these patients have not been very extensively studied. The first group includes the childhood syndrome of pica and those who habitually consume hair and other items, leading to bezoar formation. By and large these are grossly disturbed people.

Food faddism, vegetarianism, addiction to peculiar diets, morbid concern over contamination of food, harmful ingredients, artificial additives, etc., and excessive use of laxatives or enemas may present as thoroughly rationalized behavior, or in relationship to some gastrointestinal complaint which the patient usually explains in terms of his idiosyncratic concepts. Such patients are unlikely to consult physicians about their theories of diet or digestion. Indeed, they commonly have a low regard for the medical profession and may withhold such information. More often they offer such traditional complaints as lack of appetite, nausea, vomiting, eructation, bloating, abdominal rumbling, "indigestion," excessive gas, diarrhea, or constipation, but a less directed inquiry which permits the patient to elaborate his own ideas about his difficulty quickly reveals these to be expressions of more complex and pathological ideation. In brief, they reflect

morbid psychological concepts of something “bad” or destructive within the body, which in actuality represent displacements of “bad” or disturbing thoughts or fantasies. Accordingly, the patient sees certain foods or the contents of the bowel as positively bad or dangerous, not simply as disagreeing with him—a contrast to patients with specific food intolerances. Instead, they espouse complex and bizarre theories as to the mode of action of the food on the body or mind, and sharply divide foods into beneficial and harmful categories. Some may indulge in compulsive and excessive catharsis, or use of enemas or colonic irrigation as means of getting rid of the “bad” that is inside. Secondary nutritional deficiencies and electrolyte imbalances may result from such self-imposed dietary restrictions or excessive purging.

More detailed psychological inquiry usually establishes that these strange notions are not restricted to the functions of the gastrointestinal system but extend to many other spheres as well. Thus these people may also exhibit eccentricities in dress, manner, behavior, and belief systems, and belong to crank or fringe groups. Some are obviously schizophrenic, while most reveal at least an inclination toward the persecutory delusional attitude of the paranoid. In general, they feel strongly about their theories, which are not easily modified by any argument no matter how sound.

**Encopresis and Psychogenic Megacolon**

Encopresis, or “fecal soiling,” like its urinary counterpart, enuresis, with which it is occasionally associated, represents a complex psychologically determined failure or lapse in toileting. It consists of the passage of stools of normal or near-normal consistency into clothes, bed clothes, or any receptacle not intended for such purposes. It typically begins in childhood either as a failure to achieve proper toileting or as a loss of previously achieved bowel control. Less frequently it extends into adulthood, unless one includes in this category patients who become incontinent in the course of organic brain disease. Severely withdrawn, catatonic schizophrenics and other disturbed psychotics may also relinquish normal standards.

Among children encopresis may take the form either of the promiscuous and casual expulsion of feces whenever the impulse so moves or of prolonged retention of stool, with leakage of feces or periodic huge movements. The latter may be associated with enormous distention of the colon, sometimes designated as *psychogenic megacolon.* This may be distinguished from *aganglionic megacolon* (Hirschsprung’s disease) by the following characteristics. It begins at an age when neuromuscular control is to be expected; the child is encopretic (as defined above); there are periodic voluminous bowel movements either spontaneously or after an enema; defecation may occur in supine and standing positions; the rectum commonly is packed with feces; episodes of intestinal obstruction do not occur; the course is relatively benign; and the spastic rectal segment characteristic of

Hirschsprung's disease does not occur.

Of the many variables involved in the genesis of encopresis, toilet training and possibly some intrinsic factors enhancing the meaning of the bowel movement for the child appear to be the most important. The reader is referred to pp. 656-657 for a discussion of such factors in child development.

Giant megacolon or megasigmoid may occur in chronically institutionalized psychotic, mentally deficient, or brain-damaged patients. It is thought to reflect a neglect to respond to defecation stimuli, leading to the accumulation of enormous fecal masses. Major complications include sigmoid volvulus, secondary toxemia, and perforation of a stercoraceous ulcer. Subtotal colectomy may be necessary.

**Feeding and Bowel Disorders with Psychosis**

Reference already has been made to the role of psychotic ideation in the genesis of some of these disorders. It suffices to add here only that such occur most commonly in the syndromes of paranoid schizophrenia and endogenous depression where delusions of internal persecutors are not uncommon. The paranoid may complain of bowel symptoms, including bizarre rectal sensations, while the depressed person typically suffers with anorexia and constipation which at times may be considerable.

## Psychophysiological Disorders

Psychophysiological gastrointestinal disorders include concomitants of affect, local defense reactions, or the expressions of drive patterns. Interactions between such physiological processes and other preexisting or concurrent somatic processes may result in organic pathology.

### Physiological Concomitants of Affects

It has been known for centuries that intense or prolonged unpleasant emotions may be accompanied by gastrointestinal symptoms associated with changes in gastrointestinal function. Changes in secretory patterns, blood flow, and motility have been demonstrated in the esophagus, stomach, small bowel, and colon during spontaneous as well as evoked emotions, but so far there is little information as to how to relate such physiological changes to the symptoms experienced during affect experience. Hence, at the present time little is known about the clinical significance of such physiological changes, at least as they involve otherwise normal gut. The story may be different in the presence of preexisting defect or abnormality, as will be discussed below.

Be that as it may, it is important from the practical clinical point of view to appreciate that the patient who presents with such gastrointestinal complaints as change in appetite, nausea, vomiting, cramps, diarrhea, or constipation may be undergoing psychological stress, and be experiencing

anxiety, shame, guilt, depression, or anger. When consulting a physician, some patients place the major emphasis on their physical symptoms rather than on their emotional state. At times this is a way of avoiding having to face the underlying psychological issues, while at other times it reflects the patient's expectation that the physician will be more attentive to somatic than to psychological complaints. By conducting a more thorough interview, the physician will usually be able to establish that the patient is experiencing a significant psychological stress, such as a frustrating life situation, a recent or impending loss, or an interpersonal conflict, and that he is also exhibiting other psychological or physiological expressions of affect. Thus, the patient experiencing realistic or neurotic anxiety is likely, at the same time, to reveal some of the usual circulatory and respiratory concomitants of anxiety, such as palpitation, tachycardia, cold moist hands, sighing respiration, etc., as well as to be beset with anxious or phobic concerns of one sort or another. The depressed patient may appear lethargic, inactive, burdened, slowed down, and may acknowledge feeling blue, discouraged, pessimistic, helpless, or hopeless.

In general, it is not difficult to identify the patient whose gastrointestinal symptoms are reflections of the physiological concomitants of an affective response to psychological stress. However, it cannot be emphasized too strongly that a direct cause-and-effect relationship is not necessarily justified when gastrointestinal symptoms follow a psychological

stress, for it is also entirely possible for an organic gastrointestinal disorder to develop under quite the same circumstances. For this reason, the most meticulous care must be taken in the study and examination of the patient whose gastrointestinal symptoms appear during or after a period of obvious psychological stress, so as not to overlook these occasions when a somatic lesion develops as well. Awareness of this possibility is generally sufficient to alert the physician to be comprehensive in his inquiry. One should be especially wary of patients who are insistent on ascribing their symptoms to psychological stress, for just as some patients emphasize somatic processes in order to avoid facing their psychological problems, so, too, may patients fearful of organic disease, especially cancer, set up the smoke screen of alleged psychological causes to hide from themselves and their physician the organic state they fear more.

Another potential source of error in the differential diagnosis of gastrointestinal disturbances accompanying affects and psychological distress concerns the patient who is experiencing an affective response to an *occult organic process.* A notorious offender in this regard is *carcinoma of the body or tail of the pancreas,* though other types of intraabdominal neoplasm may also be responsible. Prominent complaints among patients with such occult disorders are irritability, anxiety, depression, or hypochondriacal concern, as well as the gastrointestinal complaints commonly associated with such affective states. The high frequency with which abdominal or back pain

eventually occurs in pancreatic cancer is the most important clue to the correct diagnosis. In all likelihood, the important factors in the prominence of psychological symptoms in pancreatic carcinoma and other occult disorders are the vagueness and intractability of the symptoms, and the difficulty in reaching a definitive diagnosis. Diagnostic or therapeutic uncertainty on the part of the physician is another potent source of psychological stress to such patients.

**Local Defense Reactions**

In addition to the more or less nonspecific physiological patterns of affects already referred to, there are also local defense patterns involving the surfaces and the portals of entry into the body, such as upper gastrointestinal tract, respiratory passages, lower bowel, lower urinary tract, skin, and conjunctivae. All of these local reactions constitute well-defined riddance patterns designed to cope with noxious agents, be they irritating chemical substances, poisons, foreign bodies, or microorganisms. However, identical responses may also be provoked by a learned stimulus that indicates the threat of such a noxious agent, as well as by a stimulus that is symbolic of a past danger. It has now been suggested experimentally that specific visceral and glandular responses can be learned. Such local responses to learned or symbolic stimuli include surface changes, to dilute, wash away, neutralize, or digest the noxious material, and motor activity to keep out or expel the

noxious agent. Surface charges include edema, vascular engorgement, and hypersecretion and may involve the skin, the conjunctivae, and the mucous membranes of nasal and upper respiratory passage, bronchi, esophagus, stomach, and colon. Motor activity includes spasm, hyperperistalsis or reverse peristalsis of the smooth muscles of esophagus, stomach, bronchial tree, sigmoid, and rectum. Accordingly, individuals may respond to certain symbolic stimuli with such manifestations as engorgement and congestion of the nasal passages, nausea and vomiting, esophageal spasm, pylorospasm, diarrhea, etc. Presumably the stimulus is symbolically experienced as justifying such local defense reactions, either because it is capable of being so represented mentally or because it was in some way in the past associated with a situation in which such reactions had been activated by a noxious agent. For example, nausea and vomiting may ensue upon eating contaminated fish, on the sight or odor of fish, at the thought of eating fish in the same setting where the fish was first eaten, or upon the anniversary of the original experience. Such gastrointestinal reactions may occur in response to foods that fall under cultural, religious, or family taboos, unfamiliar foods, foods from filthy sources, foods with disagreeable sensory properties, and foods simply with unpleasurable associations.

The psychological mechanisms involved in such reactions are closely related to the conversion reactions involving the same systems and in some instances the two cannot be distinguished. The example of nausea and

vomiting just cited does not, strictly speaking, constitute a conversion reaction as we have defined it. But were fish, be it the animal, the word, or the idea, to be equated symbolically with an unconscious conflict (e.g., a conflict over a wish to take the penis in the mouth), then the reaction pattern more properly constitutes a conversion.

### Displaced or Incomplete Drive Patterns

Some somatic reactions do not constitute expressions of defense but of incomplete or substitute drive activities where the full expression of drive is blocked by conflict or by external restraints. Thus, increased secretory and motor activity of the stomach or of the bowel may reflect oral or anal drive activity which for some reason cannot adequately be expressed in psychological or behavioral terms. It is uncertain how often such processes are productive of symptoms in a person with a normal gastrointestinal tract. Presumably, prolonged tension of such origin could contribute to hyperemia, hypersecretion, or hypermotility with consequent symptoms of dyspepsia, heart burn, gas cramps, constipation, or diarrhea. It is also conceivable, but as yet unproven, that such psychophysiological influences may play a role, directly or indirectly, in the variations in symptomatology of such conditions as esophagitis, hiatus hernia, diverticulosis, and even tumors. For example, in the presence of a hiatus hernia, hypersecretion of gastric acid so induced may contribute to the symptoms of peptic esophagitis; with a bowel tumor,

increased motor activity may give rise to the first symptoms of the developing bowel obstruction.

Some disturbances are due to the inhibition of a drive action after the physiological process has been initiated. This is exemplified in the gastrointestinal tract by “air swallowing” or aerophagia (with bloating and eructation). The syndrome may occur in some individuals when a strong need to discharge feelings by speaking has to be suppressed. Normally during speaking a small amount of air is taken into the esophagus at the beginning of inspiration and this is used for phonation during the balance of inspiration. If some of the motor actions of speaking are carried out at the same time that actual phonation is inhibited, then the air may be swallowed instead of expelled. Clinically one notes audible swallowing of air and frequent belching during periods when the patient remains silent while struggling to keep from exploding with a verbal torrent. Once encouraged to vocalize what is being held back, the episode may quickly subside.

**Complications of Affect Concomitants**

Reference has already been made to some of the complications which may develop when psychophysiological reactions involve gut which already is the site of structural abnormalities. For completeness, mention must also be made of the role of psychological stress responses acting in a nonspecific way

to alter resistance of the body to physical stressors or latent intrinsic metabolic or cellular defects. Empirically, it has been noted that a wide variety of organic disorders become manifest in settings in which individuals psychologically "give up" upon encountering some life situation with which they are unable to cope. The corresponding affect states are best described as "helplessness" and "hopelessness." Infections, neoplasia, metabolic disorders, and degenerative changes all have been noted to emerge under such circumstances. It is hypothesized that some biological changes occurring during the psychobiological state of "giving up" may, in as yet unidentified ways, constitute conditions permissive or precipitating for the onset of the somatic disease, so long as the necessary predisposing organic factors already exist. On the other hand, in the absence of such somatic determinants, no somatic disorder develops, though the psychological state is nonetheless manifest in terms of affects and behavior, often experienced by the patient as depressive. Sometimes more discrete psychopathological states develop instead of somatic disorder.

Such relationships, while as yet unexplained, underscore again the practical necessity to deal with somatic and psychological phenomena in a unified fashion. All persons experiencing psychological decompensation in response to stress must be considered also as potentially having organic disease, rather than solely as being candidates for psychophysiological disorder. Accordingly, somatic symptoms occurring under such

circumstances must be carefully evaluated. Gastric or bowel cancer, benign gastric ulcer, intestinal tuberculosis, active amoebic colitis in a chronic carrier, acute pancreatitis and even appendicitis have been reported under such circumstances.

## Somatopsychic-Psychosomatic Disorders

In this grouping belong certain conditions which in the past have been designated as "psychosomatic diseases," as well as some not heretofore so considered. This sequence of terms is intended to convey two basic notions as to the etiopathogenesis of these disorders. The first is that the primary factor in the genesis of the disorder is a somatic process which not only is responsible for the nature of the final organic state, e.g., duodenal ulcer, but also is capable of contributing directly or indirectly to the development of specific psychological characteristics. Some of the ways in which gastrointestinal processes may influence psychic development have already been discussed. The second is that these psychological features define, in a more or less specific way, the circumstances which prove psychologically stressful for the individual, and hence the psychodynamic conditions under which the organic process may become activated. The sequence of the term "somatopsychic-psychosomatic," thus has developmental and chronological implications. It specifies the primacy and the necessity of the somatic factor in the genesis of the ultimate lesion as well as its influence on psychic

development. At the same time it specifies the influence of psychic factors on the ultimate emergence of the somatic lesion. To fulfill these requirements, the somatic factor must be present and exerting an influence from very early in life, placing it in the category of a genic, congenital, or early acquired defect.

This formulation gives due emphasis to the evidence that a somatic factor (the constitutional factor of Franz Alexander) is necessary before a particular psychodynamic complex can give rise to a particular disease. But it goes further than the classical psychosomatic concept in that it proposes that the demonstrated psychological similarities of patients with each of these disorders reflects in addition a contribution of the somatic factor to psychological development as well. It is in these regards that these disorders differ from those designated more simply as psychogenic and psychophysiological. The following clinical features characterize the disorders which are classified as somatopsychic-psychosomatic:

The disease may make its first appearance at any age, from earliest infancy to old age. Its occurrence in the neonatal period, though rare, may be regarded as evidence for the overriding importance of the somatic factor in these cases. Ordinarily, the peak incidence of first attacks is during adolescence and early adulthood.

Once initiated, the disorder is characteristically chronic or recurring.

Though some remissions may be complete, with no evidence of residual structural change, the capacity for relapse is ever present, provided the appropriate pathogenic conditions recur.

Psychological stress is an important contributing factor for the development of the manifest disorder. Furthermore, careful clinical psychological study reveals for each illness an impressive consistency, not only in respect to the psychological characteristics of the patients so afflicted but also in the particular psychodynamic settings that are stressful in provoking, as well as helpful in relieving, attacks.

The following gastrointestinal disorders are here classified as somatopsychic-psychosomatic, though the data justifying such a categorization are more complete for the first three than the others: duodenal ulcer, ulcerative colitis, celiac-sprue syndrome, regional enteritis and colitis (Crohn's disease), irritable bowel syndrome (spastic colon, mucous colitis), and achalasia.

## Duodenal Ulcer[3]

The work and ideas of Mirsky elucidating the pathogenesis of duodenal ulcer provides the paradigm for the somatopsychic-psychosomatic concept.

### *Pathogenesis*

Most patients with duodenal ulcer characteristically have large and chronically hyper-secreting stomachs. Some active ulcer patients show a low secretory capacity, ascribed by some to accompanying gastritis. But while duodenal ulcer will not develop in the absence of acid and pepsin, hypersecretion alone is not sufficient for ulcer formation. Thus, while duodenal ulcer patients are relatively high acid and pepsin secretors, not all hypersecretors have ulcers. Yet, as Mirsky has shown, those persons with consistently higher gastric secretory capacities, as evidenced by plasma pepsinogen values above the median for the total population, constitute the subgroup from which the bulk of actual and potential duodenal ulcer patients are drawn. In addition, the same distribution of plasma pepsinogen levels holds for children as for adults, suggesting that the tendency toward higher secretory patterns is established early and presumably maintained into adult life.

These findings identify at least one of the somatic factors in the genesis of duodenal ulcer. Whether the large stomach with its big parietal cell mass and its generally increased secretory potential is a genetically determined anatomical characteristic, or whether the stomach hypertrophies in response to some primary central nervous system influences operating from birth, cannot be answered. There is a significantly higher concordance of ulcer disease among monozygotic than dizygotic twins and a highly significant excess of ulcers among close relatives. Relatives without ulcer show a highly

significant increase in hydrochloric acid response to maximal histamine stimulation when compared with controls. Individuals who are blood group O and nonsecretors of blood group antigens are much more liable to duodenal ulcer. While such findings indicate a genetic factor, Pearl et al. have produced a marked and sustained increase in the parietal cell mass in cats by continuing anterior hypothalamic stimulation for four to six weeks. This suggests that increased functional demand, for whatever reason, may also contribute to the development of a hypersecretory capacity. Whichever factors may be operating it is known that infants differ in their patterns of feeding activity, but whether those with the more active gastric secretory potential are also the ones with a more vigorous drive to nurse has not yet been studied. Be that as it may, such a possibility provides the basis for an attractive hypothesis relating ulcer predisposition with incompatibilities between mother and infant in the early nursing relationship. As has already been discussed, the repetitive sequences of hunger crying → feeding by mother → satiation → sleep reflect one parameter of a rising and falling psychic tension, regulation of which is achieved in relationship with another human being, the nursing adult. The drive aspect of this has been designated as *oral,* since the tension can be relieved only by oral activities, namely nursing and related processes. The hypothesis suggests that the infant with the more active gastric secretory pattern behaves more of the time like a hungry infant than does the normo-or hyposecreting infant. Furthermore, it

proposes not only that infants differ in the vigor of this oral drive but also that mothers differ in their ability and capacity to satisfy the oral drive. Thus, one may postulate a range of possible mother-infant relationships as shown in Table 27-1.

*Table 27-1. Relationship of Infant's Oral Drive to Mother's Ability to Gratify It*

| INFANT'S ORAL DRIVE | MOTHER'S ABILITY TO GRATIFY ORAL NEEDS | INFANT'S ORAL SATISFACTION |
|---|---|---|
| 1. High | High | May be achieved |
| Medium | High | Will be achieved |
| Low | High | Will be achieved |
| 2. High | Medium | Will not be achieved |
| 3.Medium | Medium | May be achieved |
| Low | Medium | Will be achieved |
| 4. High | Low | Will not be achieved |
| Medium | Low | Will not be achieved |
| 5.Low | Low | May be achieved |

According to this schema, when the mother's ability to gratify oral needs matches or exceeds that of the infant, then the infant will have a good chance of satisfaction and hence a better opportunity to gain confidence that oral tensions will not become intolerable or remain unrelieved. On the other hand, when the ability of the mother to satisfy the oral drive is relatively lower than

the need of the infant, the latter repetitively or chronically will be exposed to periods of oral tension and will have difficulty gaining confidence that the environment can be depended upon to fulfill these needs. Furthermore, this schema allows for the possibility that even a mother with an excellent integrative capacity and without any basic hostile or rejecting attitudes toward her infant may not succeed in satisfying the physiological and psychological needs of an excessively orally demanding hypersecreting infant. Such failure on the part of the mother may also prove to be frustrating to her and hence may provoke in her a hostile or rejecting attitude toward her infant. Thus, relative incompatibilities between infant needs and maternal capacities may serve to intensify and entrench in the developing child strong oral-dependent wishes, expressed ultimately as a lack of confidence in the ability or willingness of the environment to provide and in a corresponding need in one way or another to compensate for this. Such tensions, projected over the entire developmental span of the child, may be expected to exert a significant influence on the ultimate psychic structure of the adult.

This hypothesis corresponds closely to what has long been known psychologically about the ulcer and ulcer-prone patient. So-called oral character traits and conflicts around the dependent-independent axis, though expressed in many different ways, are prominent characteristics of duodenal ulcer patients. But not all persons with such psychological characteristics develop ulcer or are ulcer prone. Whether or not a duodenal ulcer develops

later in life is dependent upon still another factor, namely, the secretory capacity of the stomach, the greatest potential for ulcer formation being among those who are hyper-secretors and were orally frustrated in infancy. In this way we can understand how some hypersecretors, by virtue of adequate nurturing, may develop neither noticeable psychological distortions nor duodenal ulcer; how hypersecretors and some normosecretors with adequate mothering may be highly ulcer prone; and how other normosecretors with inadequate mothering may develop psychological traits indistinguishable from those found among ulcer patients, yet never develop ulcer. It is not the gastric hypersecretion alone which is the decisive determinant in the psychological development but the success or failure of the transaction between mother and child around this need-frustration cycle. If the infant with hypersecreting stomach is adequately satisfied, his psychological development will be less influenced by the kinds of distortions which result when such oral needs are chronically or recurrently unsatisfied. Hence he will be less ready in later life to experience situations as threatening his inner sense of security or his confidence in the environment as a source of support. On the other hand, hypersecreting infants less adequately handled may suffer on both scores and hence be more vulnerable to ulcer formation. This would explain not only the occurrence of hypersecretors (as determined by plasma pepsinogen) without ulcer, but also the occurrence of ulcer among those with pepsinogen levels more near the median.

While the secretory capacity of the stomach and the psychological status together determine the individual's vulnerability to duodenal ulcer formation, these do not determine whether or when an ulcer will develop. This is dependent on current psychosocial factors and the degree to which they are psychologically stressful for the particular individual. Thus it is possible for one individual with relatively high ulcer vulnerability to go through life without ever developing an ulcer, while another, who may even have a lesser vulnerability, may experience repeated bouts of ulcer activity. The psychosocial situations specifically stressful for each individual make up the precipitating circumstances determining the point in time at which an ulcer ultimately forms in the ulcer-prone person.

Strong support for this formulation comes from a study in which it was possible to distinguish, by purely psychological means, the hypersecretors from the hyposecretors and to predict among whom peptic ulcer developed in a stressful situation. From a group of over 2000 army inductees, sixty-three were selected with high serum-pepsinogen values and fifty-seven with low pepsinogen levels. Not only could these two populations be distinguished by psychological criteria (without prior knowledge of the pepsinogen values), but also the three soldiers who subsequently were found to have evidence of healed ulcer, and the six who developed active ulcer during the induction period, all fell in the upper 15 percent, eight in the upper 5 percent of pepsinogen values.[4] Of relevance to these findings are the experiments of

Ader on gastric erosions in the acid-secreting portion of the stomach provoked by subjecting rats to physical restraint for six hours. These studies demonstrated that, while animals with high plasma pepsinogen were more likely to develop erosions than were those with low levels, high pepsinogen was neither necessary nor sufficient. Taking advantage of the known twenty-four-hour activity cycle of rats, it was hypothesized that restraint instituted during a period of activity would be more "stressful" than during a period of quiescence. When rats were restrained under these two conditions it was found that all the rats who developed erosions had high pepsinogen levels and had been restrained during a period of activity.

### *Psychological Characteristics of the Gastric Hypersecretor and Duodenal-Ulcer Population*

The classical psychodynamic formulation of the peptic ulcer patient was developed by Alexander and has been confirmed and elaborated by others. Mirsky has shown that comparable psychological features characterized about 85 percent of the hypersecretor group whether or not they had had active ulcer to the time he examined them. As has already been stated, similar features may be expected as well among some individuals who are neither hypersecretors nor have ulcers. Among identical twins discordant for ulcer, the twin with the peptic ulcer displays these psychological features more prominently than the twin without ulcer.

The basic psychodynamic trends in the hypersecretor-duodenal ulcer group cluster around strong needs to be taken care of, to lean on others, to be fed, to be nurtured, to have close body contact of a succoring type. Many developmental factors serve to determine how such a central organizing psychodynamic tendency is eventually expressed. By way of emphasis, several caricatures of hyper-secretor ulcer-prone patients may be drawn to indicate how these underlying dependent wishes may be organized.

**The Pseudoindependent.** His underlying dependent needs may be largely or completely denied and an opposite facade presented. These patients then appear as highly independent, self-reliant, aggressive, controlling, and overactive. Men present a caricatured "hypermasculine" facade, while the women show strong "masculine"[5] identifications. Such persons ridicule the necessity for rest, relaxation, or vacations, and are contemptuous of those they consider weak and dependent. In Western society these characteristics are peculiarly in keeping with success in the business and professional world. The interpersonal relationships of these patients are controlling rather than warm. By dominating or controlling behavior they force others to provide their wants and in this way succeed in keeping unconscious the gratification of their dependent needs. The spouse, for example, is likely to be the long-suffering, self-denying provider, while the patient sees himself as powerful and self-sufficient. The following case illustrates this situation. They are vulnerable to ulcer disease early in life and

vascular disease later on.

Mr. D., a forty-eight-year-old consulting engineer, had ulcer symptoms on and off since age twenty.[6] The twelfth of fourteen children born of immigrant parents, he was a completely self-made man. With a harsh, exacting father and an overburdened mother, his childhood was marked by premature assumption of work responsibilities and denial of the usual childhood gratifications. He early strove for and achieved a status of such social and occupational independence that he could claim he was beholden to no one. His greatest success was as a consultant who "cured sick industries," a situation in which he could feel that the entire organization depended upon him. Indeed, he only accepted such consulting positions under the condition that he take orders from no one. Aggressive, dominating, constantly on the go, involved in many ventures at a time, he never rested or took vacations. Indeed, when a well-intentioned physician advised that he buy a farm as a means of relaxation, he converted it into a successful business venture.

Supporting this facade of ruthless independence were a coterie of assistants, secretaries, and sycophants who were kept on the go doing his bidding, and a wife to whom he cynically assigned the task of catering to his needs at home and toward whom he felt no affection. He divorced his first wife and left his children when she became too preoccupied with their care, marrying a second woman who would devote herself to gratifying his needs.

The intense drive to be cared for and supported, a need of which he was completely oblivious, was revealed not only by the efficient machinery he set up to assure this, as described above, but also by numerous side remarks and slips of the tongue. He repeatedly spoke of what a good cook his mother was and made invidious comparisons with his two wives. Of one he said, "She just puts on a God-damn salad with a couple of leaves." He derived much pleasure from feeding and caring for the farm animals, saying, "I treated them better than myself," but quickly philosophized that "there is danger in taking care of someone so well that they never take care of themselves."

Ulcer symptoms first developed soon after being drafted into the Army in World War I when he could not control his environment. Subsequently, symptoms occurred when his wife or his staff failed him, when threatened by reverses beyond his control, and between jobs. As he grew older, he subtly shifted toward a more obviously dependent relationship with an older business executive in whose organization he, for the first time, took a permanent position. His most severe ulcer symptoms occurred after this man died and was succeeded by his son, who deprecated our patient.

**The Passive-Dependent.** The underlying dependent needs are overtly expressed and to a considerable degree are conscious as well. These persons, some of whom may be fairly successful, are outwardly compliant, passive, ingratiating, eager to perform for others; yet they are also clinging,

dependent, and may even be demanding in a passive-aggressive way. They tend to get into social and interpersonal relationships in which they can depend on a nurturing figure or a paternal, supportive social organization. The men may show strong feminine identifications.[7]

The patient was a fifty-two-year-old black laborer born and raised on a farm in the South, the middle child of thirteen children. He was much attached to his mother, but felt discriminated against by his father and brothers. He was the hardest working and most conscientious of all the children. At twenty-one years of age he married a motherly, dependable type of girl. Mild, transient epigastric distress first developed when the patient became worried over his wife's frequent pregnancies. Because of lack of economic opportunity in the South, the patient moved his family to Cincinnati and obtained work in a railroad roundhouse, where he remained twenty years. His bosses gradually entrusted him with more responsibilities without commensurate salary increase. Fellow workers soon came to know that he would finish the work that they had left undone. This caused the patient to feel resentful toward them, but he was not able to summon up enough aggressiveness to object. By hard work and careful saving he and his wife built their own home and successfully raised a family of five children. When this house burned to the ground, his wife was badly injured, and two grandchildren were burned to death. He struggled to reaccumulate his fortune, but was discouraged by increased responsibilities at his job without a raise and by the failure of his

wife to recover from her injuries. During this period, symptoms of a duodenal ulcer started. Epigastric pain was experienced at work when he felt imposed upon by his boss or fellow workers, and it was accentuated at home when his wife was forced to take to bed. A rather meek, effeminate individual, he became quite dependent on the therapist and was never able to express any aggression toward his doctors, illustrated by the fact that he was unable to interrupt his visits to his former doctor, "because I don't want to hurt his feelings."

**The Acting Out.** In this group the dependent needs are taken care of by blatant acting out and/or by insistent demanding. These are, psychologically speaking, the most immature patients; their character is marked by the infantile trait of "I want what I want when I want it," even if this involves asocial, antisocial, or criminal behavior that disregards the needs and rights of others and of society. Irresponsible, with little investment in achievement, they may drift from job to job and are often unemployed. Addiction to tobacco, alcohol, and drugs is common. In their relationships they are parasitic and without consideration of others.

The patient was a thirty-eight-year-old man whose childhood was unhappy and deprived. Before he was three years old his parents separated and he was placed in an orphanage. Later, he never got a permanent job or settled down, but drifted around the country working spasmodically as a

peddler or dishwasher. His first marriage was unhappy. Ulcer symptoms and chronic alcoholism developed in conjunction with economic difficulties and incompatibility with his wife. He married a second time to a motherly type of wife, but his ulcer was reactivated and later perforated while she was pregnant. Following an operation it was quiescent for a short period during which he obtained a temporary job as a cook. When his employer, in desperation over the manpower shortage, made the patient night manager of the restaurant the ulcer began to bleed.

These caricatures serve to highlight the extremes of the types that are most vulnerable psychologically and hence most likely to develop active ulcer. While all share the same underlying psychodynamic tendencies, among many these are much more subtly manifest or defended against. Indeed, some hypersecretors even have evolved such effective and socially acceptable psychological and social devices to assure satisfaction of needs, and are so well buffered against stress, that they may never develop an ulcer or do so only during some extreme stress, as the death of the beloved spouse or the threatened loss of a business. On the other hand, there are extreme hypersecretors who, though psychologically fairly well adjusted, have such a low threshold for ulcer formation that ulcer symptoms occur in response to relatively minor variations in their life situations.

### *The Nature of the Pathogenic Psychological Stress*

Effective frustration of dependent needs is the common denominator of the psychological stresses leading to activation of duodenal ulcer. This may include any of the vicissitudes of life which result in brief or prolonged periods of deprivation. It may be a feeling revived by virtue of passing through the anniversary of a previous frustration. It may also be brought on by some symbolic stimulus and the development of an intrapsychic conflict evocative of such frustration. In brief, the precipitating events are characterized by their capacity to mobilize fears of loss of love or security through intensification or frustration of persistent infantile, passive dependent wishes, usually with feelings of helplessness and anger.

Awareness of the psychological and social devices characteristically utilized by these patients to assure gratification of dependency needs is useful to the physician in anticipating what will be stressful for any particular hypersecretor ulcer-prone patient. Thus, as illustrated in the preceding examples, the pseudoindependent person is likely to have ulcer activity when his own efforts no longer succeed in forcing others to provide, or when external circumstances beyond his control become frustrating. The passive-dependent person may develop ulcer symptoms when the person or organization upon whom or which he is dependent refuses or fails to satisfy his needs. The acting-out or demanding person will get symptoms when he is forcibly restrained from acting out, as when jailed, or when supplies of his needs simply are not forthcoming. Groen suggests that the rising incidence of

peptic ulcer among men in the twentieth century may be related to the fact that the specific conflict situation is linked with the social structure of twentieth-century Western society. Only in this culture is work so important as a way to obtain recognition and increase self-esteem, while the emancipation of women renders them less available to some men for gratification of dependent needs.

In most cases the sequence of events in response to such a psychological stress is for the patient: (1) to intensify the psychological and social devices that he characteristically utilizes to assure gratification of needs; (2) when these fail, to experience increasing anger, which, however, usually must be suppressed or denied if it threatens the sources of supply still further; (3) then, to turn on to the self or internalize the aggressive impulse, with the development of corresponding feelings of guilt; and finally (4) when he no longer feels able to cope, to give up, with feelings of helplessness in some, hopelessness in others. Once symptoms begin, this sequence may be terminated or reversed by the altered expectation from the self and the changed behavior of the environment toward the patient. The exact point in this sequence when ulcer activity begins has not yet been clearly delineated.

### *Relation Between Psychological Stress and Ulcer Activation*

Little is known concerning this relation. While there is considerable

support for the thesis of Alexander that both increased dependent needs and aggression are accompanied by increased gastric secretions (as if the need for support is to be satisfied symbolically by preparation for eating and the aggression acted out by a symbolic cannibalism of the loved and hated object), as yet there has been no definite demonstration that actual ulcer formation is indeed preceded by a significant increase in gastric secretion. In general, basal acid secretion is alleged to be the same during periods of ulcer activity as during quiescence, though in some subjects healing following a severe, protracted episode may be accompanied by a fall in the high hydrochloric acid output." Basal hydrochloric acid secretion is said to be more variable among duodenal ulcer patients than nonulcer patients, but whether gastric secretion of ulcer patients is more responsive to stress is a matter of disagreement. Clearly, the Alexander thesis requires that the specific psychodynamic situation be associated with increased gastric secretion and that both regularly precede ulcer activation. No appropriate test of this assumption has yet been accomplished.

Garma has introduced another psychological construct which may have relevant pathophysiological implications. He invokes a primitive, infantile fantasy, namely that in the face of oral frustration the archaic concept of the frustrating provider (mother) is revived as a bad object inside, to be extruded or destroyed. This view evolves purely from psychoanalytic data, but it does suggest the possibility of an underlying physiological process, namely,

forceful gastric contractions periodically subjecting the duodenum to jets of highly acid gastric juice which cannot be neutralized by available enteric juice. Wolf reports such forceful gastric contractions up to the point of tetany, along with increased secretion in an ulcer patient during a stress interview Smith et al. showed a marked increase in gastric and duodenal motor activity occurred upon administration of an acid-barium meal among ulcer patients, but not among normal subjects. Rhodes demonstrated that the duodenal mucosa of patients with high levels of gastric secretion is exposed to much longer and more profound fluctuations in acidity than is that of normals, further indicating that alternation between spasm and rapid emptying may be a significant variable.

Some alteration in the mucous barrier or in other determinants of tissue resistance or of vascularity as nonspecific biological concomitants of the affects of giving up cannot be excluded. The roles of newly identified hormones, such as vasoactive intestinal hormone, gastric inhibitory hormone, motilitin, and others in the pathogenesis of ulcer is a new chapter yet to be considered by psychosomatic investigators.

### *Implications for Treatment*

From the discussion just presented, it should be evident that any activity on the part of the physician (or others) which assures gratification of

the patient's dependent needs without, at the same time, undermining his pride and self-respect, such as it is, should have a salutary effect in reversing the conditions which led to ulcer activation. Clearly this requires an understanding by the physician of the psychological and social resources peculiar to each patient. He must know, for example, to what extent and under what circumstances the pseudoindependent patient will permit himself to be controlled by the physician. The clinician must know who in the family or among friends is acceptable to and capable of supporting the patient. He must recognize that for the pseudoindependent patient, respite may not be achieved by rest or inactivity but by permission to engage in some other activity, to escape temporarily. He must know that the passive-dependent patient may need a much longer period of babying and indulgence, but also that a few of these patients are insatiable in their needs to be taken care of. He must recognize that the excessively passive-dependent patient may respond to surgery by prolonged invalidism even though the ulcer heals, while the guilt-ridden patient may have intractable pain long after the ulcer is healed. Attention to such details will greatly widen the range of effectiveness of drugs and diet beyond that achieved by neutralization of gastric acid.

The somatopsychic-psychosomatic concept also should make it evident that no form of psychotherapy can be expected to eliminate the underlying somatic determinants, that is, the life-long chronic hypersecretion and the as yet unidentified factors determining the vulnerability of the duodenal

mucosa. On the other hand, psychotherapy, including psychoanalysis, may be expected to improve in some individuals significantly the capability of the individual to manage his life, to deal with unconscious conflicts, and to gratify needs in personally and socially acceptable ways. None of these, however, can be expected to protect him from the vicissitudes of life and hence it is possible that even the best adjusted hyper-secretor may under sufficient provocation develop a duodenal ulcer.

## Nonspecific Inflammatory Bowel Disease

### *Ulcerative Colitis*

As a chronic or remitting disorder involving primarily the mucosa and submucosa of the large bowel—and occasionally of the small bowel as well—ulcerative colitis fulfills all the criteria of a somatopsychic-psychosomatic disorder as outlined above. Clinically, there is evidence that the capacity to develop the disorder is present early in life, though as yet no biological index, corresponding to the hypersecretory state so characteristic of the duodenal ulcer-prone population, has been identified. A significant familial occurrence supports the view of a genetic relationship, probably involving a polygenic inheritance with the interaction of several genes. Dick et al. demonstrated persistence of mucosal abnormality even during symptom free periods; it would be interesting to know whether such changes antedate the onset of

symptoms. Burch suggests that extrinsic factors, including psychological stress, disturb an endogenous defense mechanism directed against a forbidden clone derived from a gene mutation, and thereby bring about activation of the disease. Shorter et al. propose that the inflammatory reaction results from the establishment early in life of a state of hypersensitivity to antigens of bacteria normally present in the individual's gastrointestinal tract and that the pathological and clinical features of inflammatory bowel disease then result from a predominantly cell-mediated hypersensitivity reaction to the bowel wall. They discuss how various factors, including psychic insult, may trigger the breakdown of defenses in such "immunologically primed" patients to produce the overt disease. Engel had suggested earlier from clinical, psychological, and pathological data that the disease may result from "unidentified changes which alter relationships in the colon so that it responds to its own flora as pathogens." Spontaneous occurrence of ulcerative colitislike lesions in gibbons in response to psychological stress has recently been reported.

The manifest disease may develop at any age, including neonatally, and once initiated may be marked by remissions and relapses, or by a chronic unremitting course. When one carefully studies the setting in which symptoms develop and remit, there is a clear-cut chronological relationship between psychological stress and onset or exacerbation on the one hand, and psychological support and remission on the other. Furthermore, there is a

consistency not only in the nature of the circumstances which are likely to be psychologically stressful or helpful, but also in the psychological characteristics of ulcerative colitis patients as a group. For the most part, these characteristics antedate the development of the active disease, though they may, in certain respects, also become exaggerated in the presence of the symptomatic bowel disorder. To what extent the as yet unidentified biological preconditions for the bowel disease contribute distinctively to the psychological development of the patients can, at present, only be conjectured.

**Summary of Psychological Data.** In 1955 we summarized the available knowledge about the psychological features of ulcerative colitis patients beginning with the first study by Murray in 1930.41 Since then numerous clinical reports have largely confirmed those formulations; so too has psychological testing using projective techniques. On the other hand, studies comparing ulcerative colitis patients with "controls" (usually other gastroenterology or general medical patients) using MMPI (Minnesota Multiphase Personality Inventory), or various ratings of psychological abnormality have failed to reveal differences; indeed, one group using such an approach pronounced colitis patients to be "supernormal"! For the most part such studies can be criticized on the basis of a naive conceptualization, that ulcerative colitis is a "psychogenic disease" caused by psychic disturbances, and therefore should demonstrate more rampant psychopathology than the

control patients. Furthermore, the psychological procedures used have not been sufficiently specific to detect the personality features reported by clinicians to characterize ulcerative colitis patients. These characteristics, as described below, may differ in degree from patient to patient but still provide a reliable overview of what to expect upon the psychological study of such patients. Among the more important variables accounting for differences between patients are the sex and age at which the colitis began.

*Personality Structure.* A high proportion of ulcerative colitis patients are described as manifesting so-called obsessive-compulsive character traits, including neatness, orderliness, punctuality, conscientiousness, indecision, obstinacy, and conformity. A few are conspicuously messy and dirty. Along with these are often noted a guarding of affectivity, overintellectualization, rigid attitudes toward morality and standards of behavior, meticulousness of speech, avoidance of "dirty" language, defective sense of humor, obsessive worrying, and timidity. Some are petulant, querulous, demanding, and provocative, but by and large well-directed aggressive action and clear-cut expressions of anger are uncommon. Many investigators have been impressed with the extreme sensitivity of these patients, their almost uncanny perception of hostile or rejecting attitudes in others. They are easily hurt, constantly alert to the attitudes and behavior of others toward them, and they tend to brood and withdraw. Much activity is devoted to warding off or avoiding rebuffs, manifest in some patients by placating attitudes,

submission, politeness, attempts to please and conform, in other patients by attempts to deny or ignore by remaining proud, nonchalant, haughty, and aloof.

Some patients give an outward appearance of energy, ambition, and efficiency, but this often proves to cover feelings of inferiority, an acute sense of obligation, a need to experience some sense of security. By and large they avoid chances and do not deal daringly with their environment. Such people are often admired for their virtue, morality, and high standards. They are more likely to seek achievements in the intellectual sphere and to eschew modes of life demanding vigorous physical activity. It must be emphasized that such characteristics are entirely compatible with effective accomplishment, and indeed some noted scientists, artists, writers and even a few athletes have been numbered among ulcerative colitis victims. While good statistical data are not available, it is a clinical impression that the disorder is relatively less common in the lower socioeconomic bracket and in the intellectually less well endowed.

*Relationship with People.* The patient with ulcerative colitis reveals a rather consistent pattern of interpersonal relationship, a pattern which originates in the relationship with the mother (see below). On the one hand, he appears to have a quite “dependent” relationship with one or two key persons, usually a parent or parent figure; on the other hand, he has a limited

capacity to establish warm, genuine friendships with others.

Close scrutiny reveals that the patient often lives through a key figure who at the same time lives through him. Often this is the mother or a mother substitute. The patient appears to use the key figure as though a part of his equipment for dealing with the external world. He leans on the key figure for guidance, advice, and direction; he is reluctant to take initiative or to plan independent action, and he tends to act out the wishes, conscious and unconscious, of the key figure. At the same time this is a highly ambivalent relationship, one within which overt expressions of hostility are fraught with great danger, for to be rejected may induce overwhelming feelings of helplessness. This type of relating reflects a fixation at a symbiotic level of object relationship and is a recurring feature in the majority of patients. The quality of expectation from the key figure (mother) is magical, imperious, and omnipotent. In most cases it is clear that it is not only the patient but the maternal figure who needs the mutual symbiosis.

This pattern of relating may be carried over into the relationship with the physician. Ordinarily, the patient either becomes very “dependent” upon his physician or establishes no relationship or, at best, a very superficial one. Further, the patients who do develop a “dependent” relationship in general fare better than those who do not. Once established, it is difficult for the patient to relinquish the relationship and remain in good health. A disruption

of the doctor-patient contact is not infrequently followed by some relapse of symptoms.

*Mothers: Psychological Characteristics and the Symbiotic Relationship.* The nature of the relationship with the mother is of decisive importance in understanding the psychology of the ulcerative colitis patient. There is also an impressive consistency in the description of the mothers of patients with ulcerative colitis, although women patients describe their mothers differently from the way men do. This consistency is confirmed by direct observation of the mothers and by projective testing of the children. In general, the mothers are described as controlling and dominating. Women patients are likely to see their mothers as powerful and overwhelming figures, who make them feel helpless and dependent. They often describe their mothers as cold, unaffectionate, punitive, rigid, strict, and judgmental. The men, although describing similar domination, are more likely to find this acceptable and to portray their mothers as kind, considerate women who worry constantly about their well-being.

Women more often portray themselves as in competition or combat with the mother, while the men more readily capitulate and give in. Despite these different attitudes of the men and women toward their mothers, one readily finds many similarities among the mothers. In general they are either unhappy, pleasureless, gloomy women with no great zest or enjoyment in life,

or hard-driving, businesslike, perfectionistic women who are active and concerned with many outside interests but often dissatisfied with their own or others' accomplishments. They tend to be worrisome, complaining, pessimistic, and often hypochondriacal. Expression of genuine warmth, affection, and understanding comes with difficulty. A high proportion show moderate to severe obsessive-compulsive traits; a smaller proportion show pathologically disordered behavior or eccentric preoccupation with collections of odds and ends. A few are psychotic characters or frankly psychotic, usually paranoid. Many of these mothers are described as depressive.

A prominent feature is the mother's propensity to assume the role of a martyr, often mobilizing thereby guilty reactions from the patient.

The persisting symbiotic nature of the patient's relationship with the mother is reflected in the patient's exquisite sensitivity to the mother's feelings and behavior. The patient often behaves as if he cannot distinguish his own feelings from his mother's. Patients comment on their sensitivity to mother's sigh, disapproving look, or change in posture or facial expression, as well as to verbal expressions of distress. Some patients, especially the men, submit passively and obediently to the mother's domination. Others, while submitting, do so with the complaint that mother won't permit them to do otherwise or that they can't stand mother being upset. In general, the patient

feels under great pressure from the mother to perform, whether it be in the sense of general social achievement or in ways peculiarly designed to meet the mother's emotional needs or alleviate her guilt, shame, or anxiety. This may lead the patient to manipulate others so that mother will be spared distress. In other words, the patient "learns" the conditions under which he will be spared rejection. Mother's love is conditional on his fulfilling her requirements. In the mutual symbiosis the patient may unconsciously act on the underlying wishes or needs of the mother, even to the extent of remaining ill.

Notable is the need of these mothers to be in control of their children even after they are grown up. Many insist on taking care of their ill adult sons or daughters even when spouses are willing and available.

*Fathers.* In general, the woman patient is inclined to portray her father as a gentle, kind, passive, usually ineffective man to whom she is quite attached, while the male patient is likely to describe his father either as brutal, punitive, threatening, coarse, and very masculine, or occasionally as passive and weak, and unable to stand up to the mother. The man may see his father as threatening and abusive to the mother, in which case he becomes excessively submissive to both parents. Not uncommonly the male patient feels that his father compared him unfavorably to a more masculine brother who more adequately fulfilled the father's ideal. The woman, on the other

hand, often complains that the father did not adequately protect her from mother's aggression, that he let her down.

We have seen two men patients whose symbiotic object relationship was with the father and not the mother. In both cases the son was attempting to fulfill the ambition for physical accomplishment of a father who was frustrated by crippling in adolescence. Superficially these two patients presented as very active, even adventurous men. In both the disease began when they disappointed the father by failing in an important competitive sport event.

*Family Dynamics.* A study of families with children with ulcerative colitis has characterized these families as "restricted." They reveal a marked inability to engage in or even recognize opportunities for behavior outside the pattern of their own immediate lives. They are limited in the range of interaction, careful in dealing with each other, and they handle a variety of situations in a similar fashion. This was seen as a false solidarity or pseudomutuality. More family studies are needed.

*Sexual and Marital Adjustment.* In general, these patients tend toward inadequate sexual development. Interest and participation in sexual activity tend to be relatively low. Most of the women are frigid, and even those who experience orgasm do so infrequently. A few patients engage in little or no

heterosexual activity even when married. Many acknowledge a preference to being fondled or cuddled, more like a child, and largely reject any genital approach. They are prone to regard sexual activity in anal terms, using such terms as “dirty,” “soiling,” “disgusting,” “unclean,” etc., and are squeamish about body contact, secretions, and odors. Excessive bathing, use of deodorants, concern about being malodorous or dirty may be present even in the absence of bowel symptoms, and may be used as rationalization to avoid sexual contact. In the marital relationship the spouse commonly fulfills the role of the succoring, sustaining mother or takes a role subordinate to the mother. Sometimes it is a mother-in-law, who closely resembles the mother, who is the real object for the patient. Under such circumstances the spouse often is related to more like a sibling than a marital partner.

**The Nature of the Significant Psychological Stress.** In establishing exactly the time of onset of the disease, it is necessary to establish the first clear deviations from usual bowel activity. Many patients are found to have had rectal bleeding or abrupt severe constipation for days, weeks, or even months before diarrhea begins. When the onset of disease is accurately established, it is often found that the time interval between a psychologically stressful circumstance and the onset of the first symptom of the colitis is a matter of hours or a day or two. On the other hand, there are cases where the onset is rather gradual and not easily timed. Here one deals not with a well-defined stressful experience but rather with a gradually changing psychic

status during which symptoms gradually and sometimes intermittently develop. The latter is typical of colitis developing during adolescence. In general, psychologically stressful events are likely to fall into the following categories: (1) real, fantasied, or threatened interruption of a key relationship; (2) demands for performance which the patient feels incapable of fulfilling, especially when support had already been withdrawn or when disapproved activities are involved; and (3) overwhelming threat from or disapproval by a parental figure. As a rule hostility and rage toward the disappointing figure is repressed. Common to all these circumstances is an acute or gradually developing feeling on the part of the patient that he has become helpless to cope with what is happening. The disease becomes active in the course of "giving up" psychologically, which is marked by the affect of helplessness. Patients verbalize giving up in such terms as "too much," "despair," "nothing left I could do," "helpless," "overwhelmed," etc.

The following vignettes illustrate patterns of onset and typical precipitating, psychological stress.

*Case 1. Constipation and Bleeding.* A thirty-one-year-old married woman became pregnant a few months after the birth of her first baby. The first pregnancy had been a deliberate and successful attempt to hold her husband, who had become interested in another woman. To have two babies so close together, however, seemed more than she could cope with. Shortly after she

missed her first period she became constipated and noted the passage of bright red blood. For the next six months she continued to pass fresh blood, with and without feces, one to three times a day. Stools remained formed and somewhat constipated, often with fresh blood on the surface. True diarrhea developed six months after the bleeding began, as the inevitability of the second baby became undeniable and the implications overwhelming.

*Case 2. Acute Constipation.* A twenty-one-year-old married woman was awaiting the return from overseas of her soldier husband, whose train reached the city that day. After keeping her waiting four to five hours while he visited his mother, he appeared at the door, and without further elaboration announced that he wished a divorce. On this note he left. The same day she was seized with terrific cramplike pain in the left lower quadrant of the abdomen and an urge to defecate, but she was unable to do so. She was admitted to a hospital where she was given eight enemas in two days before any relief was achieved. Following this she had formed stools, three to four times a day, for a month, when small amounts of blood were first noted. Thereafter she passed blood and mucus four to five times a day, stools became semiformed, then grossly diarrheal and bloody.

*Case* 3. *Bloody Diarrhea.* A twenty-nine-year-old woman married when she discovered she was two months pregnant. She hoped to hide the premarital conception from her puritanical mother by saying the baby was

born prematurely. Gestation actually was seven months, so the baby was born five months after the marriage. Two days after the baby was brought home and her mother arrived to help, she had abrupt onset of chills, fever, and diarrhea which became grossly bloody in a few days.

*Case 4. Insidious Diarrhea.* A fifteen-year-old girl noted over a period of two months a gradual increase in the frequency of her bowel movements, which remained, however, formed but soft. This coincided with the first emergence of the typical conflicts of adolescence. She was then in an automobile accident, which involved no serious injury but did bring up some problems of adolescent acting out. Immediately after the accident her bowel movements became watery and frankly bloody.

*Case* 5. *Tenesmus and Cramps.* Immediately following the death of her brother, a thirty-one-year-old unmarried woman developed postprandial distention, belching, mild lower abdominal cramps, and tenesmus associated with the passage of small amounts of blood, mucus, and flatus. Her stool remained formed and hard, and she was constipated for a month. Thereafter she had one to three semisolid fecal movements with blood.

In general, the older the patient at the time of onset of the disease the more likely is the precipitating circumstance to be a major external event. Thus, a fifty-year-old chairman of a university department experienced his

first attack, which was fatal, soon after the death of both his parents in a fire. His wife, who would have been his source of support, lost her mother around the same time.

At the present time there is no information as to why this psychobiological state of giving up and helplessness is associated with activation of the ulcerative colitis process. Of interest is the fact that if the patient becomes angry and aggressive, and does not give up, but instead feels guilty, he is more prone to develop headache than activation of colitis. Indeed, the appearance of headaches in a heretofore acutely ill colitis patient is a good prognostic sign.

Three incidents from Case 1 (above) illustrate this:

*October 31, 1947—headache:* The patient had been free of bowel symptoms for three months. Her two-and-a-half-year-old son defecated in his crib and smeared the feces. "I was awfully mad and gave him a spanking. That night I had a migraine attack. The next morning I still had a headache. Then I realized how guilty I was feeling for spanking him. Shortly thereafter my headache disappeared."

*August 20, 1934—-bleeding:* The patient and her husband bought a building lot, but it turned out that the real estate man tricked them. The patient became very angry with him and told him how she felt. He was

unmoved. “I got so mad, and there was absolutely nothing I could do about it.” Now they faced the loss of their precarious financial reserves. By that evening she was bleeding.

*March 28, 1951-—headache terminating attack of colitis:* The patient began to bleed on February 20, 1951, when she realized a business venture of her husband was going to fail. She had increasing bleeding and diarrhea and after a couple of weeks it became necessary to confine her to bed at home. At my suggestion another doctor saw her at home, but she had the feeling, “you are leaving me flat.” I called her by phone daily, but she was apathetic and relatively uncommunicative. The other internist and I considered hospitalization but decided to delay it as long as possible to keep the financial burden at a minimum. On March 28, 1951, she called me for the first time and said firmly and belligerently, “You must put me in the hospital; I am too sick.” On admission I was astonished to discover that she was not suffering primarily from diarrhea but from a severe, left-sided migraine headache, with nausea and vomiting. Her opening remark was an unprecedented: “I don’t like you.” Her headache subsided by noon and within two days she had formed stools without blood.

In general patients who are good at differentiating their feelings have little difficulty in identifying the affective state most conducive to relapse. Thus one woman claimed the anxiety associated with long-standing phobic

symptoms never precipitated colitis symptoms; nor did bursts of rage expressed to her estranged husband. The dangerous period was when she ceased trying to cope actively with these stresses and gave up, sometimes taking to her bed to "sleep it off" only to awaken with cramps or bleeding.

**Implications for Treatment.** The physician who understands the basic psychological processes operating in these patients is much better equipped to do what is helpful and to avoid doing what is harmful.

The first step in the treatment of an acutely ill patient is to establish a relationship. This is best achieved through the sensitive quality of the physician's first inquiry and his prompt attention to relief of discomfort. Thereafter, constant awareness of the patient's needs and of his characteristic ways of functioning is of the utmost importance in enabling the patient to utilize the relationship with his physician as a means of reestablishing his psychological equilibrium and health. In many respects, this is the keystone of the whole treatment program, and if the initial step is unsuccessful, the whole treatment program may fail.

The physician who undertakes the care of the patient with ulcerative colitis assumes a very complex responsibility, for if he succeeds in this first step of establishing a relationship with the patient, he must be aware that in so doing he is, in part at least, taking over the role of the key figure. This

means that while this relationship may be a powerful factor in initiating recovery, its disruption may carry with it the equally great danger of precipitating a relapse. The patient, for some time at least, remains just as vulnerable to a disturbance in his relationship with his physician as he was to a disturbance in his original key relationship. He quickly comes to endow his physician with omniscient and omnipotent qualities. He literally expects the physician to know more of his needs and wants than he himself reveals. Therefore, the doctor must attend closely and respond appropriately to the patient's communications of needs and of sources of discomfort, even when these are not verbally conveyed. This demands patience, a willingness to devote time to the patient, and, most important, the capacity to appreciate and accept the patient's need to have tangible demonstration of the physician's reliability, even in respect to such seemingly minor details as punctuality, following through on promises, and availability for help. Simply the assurance that the physician can be reached at any time can be a powerful source of help, even if this resource is never actually used. It is difficult to overemphasize the importance of these small details, which are perceived by the patient as indices of the doctor's successful and effective participation in his care.

A patient (Case 1, above) had a serious relapse when she had called her physician to check on her medication schedule only to discover that he was out of town and unavailable for a week. When she became my patient we had

a standing arrangement whereby she could call me anytime day or night, even when I was away from the city. She called infrequently and then only to report some considerable symptom or a disturbing situation. A relapse occurred following a remission of almost a year when the patient moved into a house in a new suburban tract only to discover that the phone company had not yet laid the cables and hence she would be without a phone for an uncertain period. Symptoms promptly subsided when I was able to prevail upon the phone company to put in an emergency line and she once again knew she could reach me.

The management of the family is another important consideration. Awareness of the kind of relationship that exists with other members of the family, especially with the mother or the spouse, prepares the physician for the kinds of difficulties which may arise. Usually the important other figure is experiencing a considerable amount of guilt concerning the illness of the patient and may have a strong need to reassert her control both over herself and the patient. It is important that the physician not take a retaliative or a punitive attitude toward the other members of the family. On the other hand, to the patient he must appear stronger than any member of the family. Occasionally, for example, we find the patient making demands, such as to leave the hospital or change medication, which, in fact, reflect not the patient's needs or concerns but rather those of some other family figure. For the physician not to accede to such requests may be a great relief to the

patient, for by asserting his medical authority the physician protects the patient from what actually may have been a frightening prospect.

While this approach is predicated on a psychotherapeutically oriented perspective, it is well to recognize that some patients can profit from more systematic psychotherapy in the hands of a skilled therapist. The capacity of a patient to so benefit must be evaluated by the psychiatrist, but care must be exercised that the referral to a psychiatrist, even when initiated by the patient, is not interpreted by the patient as a rejection by the internist or gastroenterologist. The latter, by all means, should maintain an active involvement with the patient so that beginning psychotherapy is seen as an addition, not a replacement.

In one study, in which patients receiving psychotherapy in addition to medical therapy were matched with patients receiving medical therapy alone, pretreatment criteria favoring good response to psychotherapy were identified. These included: (1) the presence of an obvious precipitating event, especially if recognized by the patient; (2) depression traceable to loss, as compared to depressive apathy; (3) the unconscious use of diarrhea and bleeding as substitutes for rage and as means of punishment, in contrast to regarding the illness without shame or guilt as a justification to remain helpless and make demands on others; and (4) a wish to become independent.

In recognizing the role of psychotherapy in the treatment of these patients, one should also have very clearly in mind what psychotherapy can and what it cannot be expected to accomplish. There is no evidence at the present time that psychotherapy, no matter how intensive, can eliminate the biological defect underlying colitis. Therefore, an expectation of complete cure is unjustified. While remission and complete healing are common, psychotherapy cannot ensure against recurrence in the face of sufficient stress. The major contribution that psychotherapy can make is the modification of the basic psychological structure so as to render the individual less vulnerable to the types of situations in which the disease becomes manifest. These particularly concern the capacity of the patient to develop human relationships and to tolerate their loss or the threat of their loss. Successful psychotherapy usually brings about a significant improvement in the patient's techniques of dealing with the early parental figures, as well as some resolution of early conflicts. With this one generally sees a gradual emancipation from parental figures and an increasing capacity to establish satisfying and enduring relationships with others. But, as with any person, there may still occur events with which the patient feels he has no effective means of coping and under such circumstances the disease may resume. In general, however, we find that the patient who has achieved some successful psychotherapeutic response has more chance of maintaining a remission. But it is of the utmost importance that the patient, embarking on

psychotherapy, clearly understands that psychotherapy cannot eliminate the potential for colitis, otherwise even a mild relapse may be felt as a personal failure or destroy the patient's confidence in the therapist, thereby constituting a major stress capable of provoking a massive recurrence. Many of the serious relapses during or upon termination of psychotherapy or psychoanalysis have been of this nature and have led to an unjustified pessimism as to the effectiveness of this approach.

As to modalities of psychotherapy, insight therapy is more useful with the relatively more active, independent patients, while patients who are strongly symbiotic or transitional are helped more by support, catharsis and suggestions than interpretation. Best results are obtained by therapists who rate high in interest in the patient, empathic understanding, and optimism about results, and with patients who are most hopeful about being helped and who can develop a warm trusting working alliance with the therapist. The ability of the therapist to "fit" or match himself to the fluctuating dependency needs of the patient is important. Symbiotic patients improve when their therapists are able to tolerate their infantile dependent needs without rejection, impatience, or arbitrary corrective attitudes. The papers by Karush et al., and by Groen et al. are excellent sources of information about the psychotherapy of ulcerative colitis patients.

In considering the usual indications for ileostomy and colectomy,

namely, intractable diarrhea, recurring fistulae or abscesses, massive hemorrhage, rectal incontinence, and threat of cancer, it is important to appreciate how stressful it is for these patients not to have complete control over their bowel activity, whether it be in the form of unpredictable bleeding, diarrhea, or cramps. With his great need to maintain control over his thoughts, acts, and body, and to perform well, incapacity on this score is often felt as a true inadequacy, for which the patient often inappropriately assumes responsibility. Hence the removal of the offending colon and the construction of an artificial anus (ileostomy) over which the patient generally has much better control often has a more salutary effect psychologically than had been anticipated by the patient, his family or physician, all of whom tend to view the procedure primarily in terms of its mutilating effect. Hence the psychotherapist is well advised to keep in mind not only these indications for surgery, but also the contribution he can make in preparing the patient for operation and the postoperative adjustment. Above all must he appreciate that recourse to surgery does not constitute a failure of psychotherapy or grounds for relinquishing his therapeutic role. There is great advantage for the prospective ileostomy patient to meet a successful ileostomy patient and to learn at first hand the gains as well as the realistic problems of ileostomy. Additional help may be provided through participation in the activities of the Ileostomy Clubs, which constitute a resource not only for practical information but also for group activity which is psychologically sound for

these patients. Their slogan HELP (Help, Encouragement, Learning, Participation) clearly reflects an intuitive grasp of the basic human and psychological needs of the ulcerative colitis patients.

**Ulcerative Enteritis**. That the same pathological process may also involve the terminal ileum has been known for a long time. Less well known is that it may develop in a previously healthy ileum after colectomy and ileostomy have been performed, and under the same types of psychologically stressful situations as had previously led to the activation of the ulcerative colitis. The entire small bowel may rarely be so involved. Swelling of the stoma with partial obstruction, profuse watery drainage, or perforation may ensue. Edema, petechial hemorrhages, and ulceration of the protruded mucous membrane may be noted.

The risk of this complication provides further reason why a continuing supportive or psychotherapeutic approach is called for, even after colectomy and ileostomy, especially with the patient who has been in psychotherapy.

### *Regional Enteritis and Colitis ( Crohn's Disease )*

While not the subject of as extensive psychological inquiry as ulcerative colitis, the available data indicate many similarities between patients with regional enteritis and those with ulcerative colitis. This is not surprising,

considering the fact that although clearly differentiated on pathological grounds, there is nonetheless a tendency for the two diseases to occur in the same family suggesting a common genetic factor. Furthermore, now that it is being appreciated that a similar pathological process may affect the large bowel (granulomatous colitis, Crohn's disease of the colon), it is clear that at least some of the colitis patients studied psychologically in the past actually belonged in this category. The several patients that this writer has studied who later proved to have the granulomatous form of colitis did not appear to differ psychologically from those who had classical ulcerative colitis. The resemblance is greatest in respect to the prominence of obsessive-compulsiveness, the patterns of relating, and the vulnerability to object loss and subsequent development of giving up as the setting in which onset or relapse of active disease occurs. Compared to ulcerative colitis patients, some authors feel patients with Crohn's disease are relatively more flexible and more active, but the only systematic comparative study suggests no differences. Hence, until more information is available, it seems warranted to use the data on ulcerative colitis as a rough guide for the management of these patients as well. More detailed study is called for.

## Possible Somatopsychic-Psychosomatic Conditions

There are a number of other conditions which possibly can be classified under the heading of somatopsychic-psychosomatic disorders but which have

not yet been sufficiently studied to justify the claim.

### *Celiac Sprue*

It is currently believed that celiac disease of childhood and many instances of so-called idiopathic steatorrhea of adulthood represent the same disorder, hence the term "celiac sprue." In both diseases identical and to a large extent reversible damage to the small intestinal mucosa is produced by low-molecular-weight glutamine-rich polypeptides, isolated from the breakdown products of gluten, the water-insoluble protein moiety of wheat. Many adult patients give a history of celiac disorder early in childhood, while proven childhood celiacs, allegedly recovered, may as adults still show absorption defects, typical histopathological changes, and reactivity to gluten, with intermittent mild symptoms of malabsorption. Evidence for a genetic determinant has been brought forth, leading to the suggestion of an inborn deficiency in the intestinal mucosa of a peptidase that hydrolyzes the peptides of gluten.

The natural history of spontaneous remissions despite the presence of dietary gluten in the childhood form of the disease, and the poor correlation between symptoms and the presence of typical histopathological changes suggests that the underlying mucosal defect and the presence of gluten in the diet may be necessary but not sufficient for the development of the

malabsorption syndrome. Individuals appear to differ in sensitivity to gluten, and symptoms may also correlate more with the extent of the intestine involved than with the severity of the lesion on biopsy. The effects of gluten are more marked on proximal than on distal intestine, presumably a reflection of declining concentration of the noxious polypeptides. The great majority of patients show prompt marked clinical improvement on strict glutenfree diets with reversal of epithelial changes more complete distally than proximally. But returning gluten to the diet does not necessarily reactivate symptoms even though biopsy evidence of damage may be demonstrated. Hence some have suggested that psychological stress may be a contributing factor. Among children a disturbance in the mother-child relationship, including changes in patterns of handling and feeding, appear to be associated with exacerbations, while remissions have been brought about through improving the mother-child relationship, even without removing gluten from the diet. Among adults, with and without a childhood history, onset or recurrences are noted in settings in which real or threatened loss of support eventuates in psychological “giving up” with feelings of sadness, despair, and helplessness. These are psychological states in which Sadler and Orton have demonstrated decreased absorption of amino acids in a surgically isolated loop of ileum in a man who did not have celiac-sprue syndrome.

Suggestive data on this interrelationship between the intrinsic intestinal defect, dietary gluten, and psychological factors have been provided by

Grant's double-blind study of eight patients with adult celiac disease, four of whom were known to have had childhood celiac disease and three of whom had a history compatible with childhood celiac disease. Placed on a gluten-free diet, all patients showed remission of symptoms and improvement in absorption. Then, in a double-blind fashion they were given capsules containing either gliadin (a derivative of gluten containing the glutamine-rich polypeptides) or an inactive material. The occurrence of symptoms was noted and the psychological state evaluated. Gliadin capsules were administered a total of thirty-one periods during five of which typical malabsorption symptoms developed. All of these occurred within days of the onset of a psychological upset, generally characterized by some loss, defeat, discouragement, or helplessness. On *no* occasion did gliadin alone induce symptoms in a patient who otherwise was emotionally composed. On the other hand, bowel symptoms also occurred during periods when the patient was similarly upset but was *not* receiving gliadin. Notable, however, was the fact that under such conditions the symptoms were those of a nonspecific, nonfoul watery diarrhea, sometimes with mucus, and did not include the typical bloating or the foul smelling, pale, copious stools typical of malabsorption. These observations suggest an interaction between at least three factors in the production of the full-blown malabsorption syndrome: (1) an intrinsic intestinal defect; (2) gliadin in the diet; and (3) some effect mediated through psychophysiological or neurogenic influences.

The data available are insufficient to justify any statement concerning distinctive psychological characteristics of this group of patients. Paulley emphasizes querulousness and extreme rigidity among the more disturbed patients and perhaps a higher incidence of psychotic, often delusional and paranoid features. We have been impressed with the immaturity and dependency of the adults with a childhood history of celiac disorder as well as their unusual vulnerability to loss of love objects. Prugh, in his study of children, emphasizes the prominence of obsessive-compulsive traits, and the controlling and ambivalent nature of the mother's relation with her child, and points to evidence that such attitudes of the mother antedated the birth of the child. He describes the children on the surface to be passive, often withdrawn, inhibited personalities, with a tendency toward obsessive-compulsive features. Overt expressions of aggression or self-assertion seem to be difficult for these children. As infants, they were fussy, irritable, and cried a great deal, even before the onset of the celiac symptoms. Somatic effects of multiple nutritional deficiencies as well as of the psychological responses to diarrhea and other debilities must not be underestimated in evaluating some of these descriptions.

### *Irritable Bowel Syndrome*

This is the classical "functional" bowel disorder, characterized by alternating diarrhea and constipation, abdominal cramps, flatulence, and at

times increased mucus in the stools. Some investigators differentiate two groups, i.e., spastic colon and functional diarrhea. Those with spastic colon have lower abdominal pain and cramps as their main symptom, and in addition have constipation which alternates with diarrhea or with periods of normal bowel movements. Patients with functional diarrhea have little or no abdominal pain, their chief symptom being constant or intermittent diarrhea. Many are overtly anxious and their symptoms may more properly be classified as instances of diarrhea as a physiological concomitant of affect, though it remains obscure why some anxious people have diarrhea and others do not. Both neural and hormonal mechanisms have been postulated. Accelerated transport of intestinal contents, through increased peristalsis induced by increased sensitivity to cholecystikinin, by gastro-ileal or gastro-colic reflexes or by higher neurogenic effects may induce diarrhea simply by overloading the absorptive capacity of the colon. Both with spastic colon and with functional diarrhea it has been claimed that the colon reacts excessively to parasympathetic stimulation as compared to the colon of patients without bowel disorder or with ulcerative colitis, but some writers disagree. They point out that the increase in intraluminal pressure is a function of the mechanics of intraabdominal pressure recording, important factors being resistance to expulsion and the consistency of the stools. While pressures are low with diarrhea and high with constipation, the increased activity in painless diarrhea may reflect a control mechanism for handling excessive

intestinal contents by segmentation rather than by inhibition. Such findings give further reason to regard patients with painless diarrhea as belonging to a different group from the rest of those with irritable colon syndrome.

Be that as it may, there is virtually universal acceptance of the view that bowel symptoms in both types are somehow brought about by psychological influences. This has led to the classification of irritable colon syndrome as a "psychogenic" or "psychophysiological" disorder, the inference being that the bowel disorder can be accounted for by chronic and excessive parasympathetic stimulation psychophysiologically determined. This is almost certainly an oversimplification. The virtually lifelong symptomatic history of many of these patients suggests that there may be as yet unidentified organic factors influencing the bowel response to psychological stress. Until more definitive data are available, it seems prudent not to exclude such primary organic determinants; hence its classification here as a "somatopsychic-psychosomatic" rather than psychophysiological disorder.

Because there is no clear organic criterion for the diagnosis of irritable bowel syndrome, which even gastroenterologists make largely by exclusion, existing data on the psychological characteristics of patients with this syndrome are highly dependent upon the population utilized. In general they have been patients referred to a psychiatrist after the gastroenterologist has ruled out other explanations of the symptoms, and often because he has been

impressed by evidence of neurotic difficulties. Early published series may well have included patients who now would be recognized as suffering from lactase deficiency or adult celiac syndrome. Hence it is likely that patients so far reported on have been selected to begin with because of manifest emotional problems, and are neither a representative population nor even necessarily all have irritable bowel syndrome. With this caveat it is claimed that patients with spastic colon are more inclined to be rigid, obsessional, and compulsive individuals while those with functional diarrhea may show more diffuse free-floating or phobic anxiety as well. Many tend to be orderly, methodical, conscientious, precise, preoccupied with cleanliness, tidiness, regularity, punctuality, and schedules, and it is not surprising that some gravitate to work roles in which such qualities are valued as accounting, bookkeeping, filing, library work, etc. Such patients place a high premium on intellectual control and performance and are very restrained in expression of emotions, be they pleasurable or unpleasurable. By the same token, they tend, on the one hand, to maintain a cold, intellectual almost impervious air toward the emotional turmoil of others, while, on the other, to be extremely sensitive to hostile or rejecting behavior, or emotional outbursts when directed toward them. In the latter respect they appear as hypersensitive and easily hurt to the point at times of paranoid suspiciousness. Important in the underlying psychodynamics are conflicts about giving and receiving, and the control of aggression. Distrustful and fearful of rejection, especially if aggressive or

sexual impulses are displayed, they tend to hold on to what they possess, not to give. Some are stingy, stubborn, and parsimonious, while others overdo the guise of generosity (reaction formation) but as a result constantly feel unappreciated and disappointed that the recipient is not more grateful. Feelings of depression are common, and there is a relatively high incidence of significant clinical depression.

It has been suggested that the alternations between constipation and diarrhea characteristic of these patients reflect shifts between psychologically holding back and maintaining control, on the one hand, and letting go in an unconscious, aggressively soiling or depreciatingly giving way on the other. It is of interest that headaches commonly accompany the controlled, constipated phase, which is marked not only by guilt-determined inhibition of action but also by the use of the head (intellect). In general, diarrhea is most prominent at times when emotional tension is most evident.

### *Achalasia ( Cardiospasm )*

Though not accepted by all, the association between psychological stress and onset or exacerbation of cardiospasm has been proposed for many years. However, the disorder is relatively uncommon and hence the information available is insufficient to document more than the fact of a high incidence of psychological disturbances among the sufferers and a

chronological correlation between psychological stress and episodes of the disorder. The fact that the disease may have its onset at any age, though it is rare in infancy and childhood, that it most commonly develops in early adult life, that there is a familial incidence, and that there is evidence of a disturbance in the intrinsic parasympathetic innervation of the esophagus all favor some intrinsic organic process present or acquired early in life. Patients with achalasia have an elevated level of resting lower esophageal sphincter pressure and incomplete sphincter relaxation with swallowing. The available evidence indicates that this is caused by the loss of $\beta$-adrenergic inhibitory activity and that denervation of the sphincteric muscle is of primary importance. The difficulty in swallowing is accentuated during emotional upset but as yet too few patients have been studied in detail to provide any general psychological characterization as a group.

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## Notes

1 This chapter is a revised version of the author’s chapter “Psychological Processes and Gastrointestinal Disorders” which appeared in M. Paulson, ed., Gastroenterologic Medicine, Philadelphia: Lea & Febiger, 1969. It is used here by permission.

2 For a more detailed consideration of these concepts, the reader is referred to reference 48.

3 Comparable physiological and psychological data are not available concerning benign gastric ulcer and hence this discussion is limited to duodenal ulcer. While the presence of acid gastric juice apparently is necessary for gastric-ulcer formation, chronic hypersecretion is not characteristic of gastric ulcers, except for those occurring in the immediate prepyloric region. Rather there is evidence that factors decreasing the competence of gastric mucosa to contain an acid solution are implicated. The same probably holds true for so called stress ulcers, or acute gastric mucosal bleeding, associated with bums or trauma, though ulcers occurring after head trauma sometimes are accompanied by a sharp rise in acid secretion.

4 The fact that the hyposecretors also fall into a discrete group in terms of psychological characteristics is of theoretical interest. Furthermore, not only are these characteristics essentially the same as those that have been noted among patients with pernicious anemia but also the extreme hyposecretors (achylia gastrica) constitute the population in which pernicious anemia ultimately may develop.

5 By culturally bound definitions.

6 The role of pain from a glomus tumor was a variable in this case not discussed in this summary.

7 By culturally bound definitions.