

THE CLINICAL SIGNIFICANCE OF EMOTIONAL DISTURBANCES AFFECTING THE STOMACH, DUODENUM AND BILIARY TRACT

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The effect of emotional stimuli on the gastrointestinal tract has opened up a new field for gastroenterologists. We can no longer dismiss the clinical picture of a patient with a simple and non-informative diagnosis of "nervous indigestion." We find ourselves at the crossroads. Thorough laboratory and roentgenologic investigation may leave us in the dark as to the patient's illness. Usually there are no definite findings to justify an exact organic diagnosis. Therefore, we must turn to new avenues of approach if we are to accept the well defined dogma that "things don't just happen." It is fortunate that the gastrointestinal tract affords a fertile field for this investigation. The abundant clinical material, the frequency of complaints referable to the digestive organs, laboratory and roentgenologic control, all give us a solid foundation on which to build. That the digestive tract should be the seat of altered emotional response is best explained anatomically on the basis of its abundant afferent and efferent nerve supply. The ease of transmission of emotional stimuli from the hypothalamic region to the digestive organs is a common observation. Furthermore, there is no other vital function which from early life plays such an important role in the emotional household of the individual as eating. The relief from physical discomfort that the infant experiences while eating and the satisfaction of hunger become deeply ingrained in the child, being associated with a feeling of well-being and security. In addition, feeding is tied up with a feeling of being loved. To the child, feeding and love become inseparable. This oral-receptive manifestation in early infancy is the natural emotional state of the child. If it persists in later life, it must be suppressed, because it is not harmonious with independent adult life. The repressed oral trends may produce a disturbed function leading to changes in the physiologic equilibrium. The stomach may reveal this evidence of disturbance by becoming red, turgescient and edematous; it may be thrown into various spasms and become hyperirritable, and changes

in the secretory apparatus may become manifest. If the mechanism goes on unabated, permanent changes may ensue. The patient, not cognizant of the deep emotional factors, blames the intake of food. He suffers from various phobias of indigestion. The symptoms may be variable. Yet while they may represent the classic syndromes that have been laid down in the past for definite clinical entities, thorough laboratory and roentgenologic investigation will fail to reveal any noteworthy abnormality. The gastroscopist calls the condition "gastritis." But is this really an inflammatory process, or merely the end-result of hyperfunction? One may have some hesitancy in speaking even of atrophic gastritis as an organic disease in the absence of known cause. Atrophy can be the result of hypofunction. Likewise, hypertrophic gastritis may be the result of hypertrophy and hyperplasia similar to that seen in other organs in the presence of hyperfunction. Anyone familiar with the roentgenologic picture of the stomach should be convinced of the logic of this premise. Even gastritis with pylorospasm when there is no known cause falls into the same category. Therefore, in the absence of organic disease one must search for possible altered function resulting from emotional stimuli reaching the stomach.

When one excludes ulcer, malignant change, vitamin imbalance, anoxia from liver or cardiac disease, infections, parasitic disease or diseases of metabolism, there still remain stomach symptoms which must be explained. No more evidence is needed than the large number of gastric disturbances seen among men in our armed forces, who are all presumably healthy young persons without known organic disease. Psychodynamic factors causing hunger contractions, hypermotility or relaxation and dilatation of the stomach must be carefully evaluated. Hypersecretion, either acid or mucous, or hyposecretion unless associated with known organic disease may fall into the same category.

Therefore, it is reasonable to expect that the large group of patients with a predisposed irritable stomach will show many bizarre clinical pictures with the intake of food. Only a careful, pains-

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taking psychiatric history reveals clues as to the possible source.

What has been said of the stomach applies also to the duodenum. Disturbances of motility, changes in the lining and reflex manifestations related to the duodenum become clarified. So-called duodenitis in the absence of ulcer or cholecystitic or pancreatic disease gives rise to new interpretations. The hyperirritable duodenum which roentgenologically shows early emptying, with various and bizarre configurations fitting into no definite pattern for organic disease, may have its origin in the vegetative nervous system. The complete relaxing effect here of atropin or drugs affecting the smooth musculature is similar to that observed in the stomach. This manifestation has escaped the interpretation that the disturbances in configuration had emotional stimuli. The altered pattern of the duodenum causes reflex gastric manifestations. Duodenal stasis, which may be the result, frequently is associated with gastric dilatation, causing negative pressure. The air is sucked in through a patent cardia, and the patient complains of fullness and distention. The over-distended stomach frequently exerts mechanical pressure on the retroperitoneal portion of the duodenum, increasing the duodenal stasis. This vicious circle produces marked discomfort after eating, which may become unbearable to the patient. A sudden emission of air, which the patient refers to as belching, immediately reduces this overdistention; the pressure is relieved on the retroperitoneal portion of the duodenum, and it assumes its normal tone. The patient's discomfort is relieved, and he has a definite feeling of well-being. Thus the afferent stimuli from the abdomen are suppressed. This conscious part of the vicious circle is markedly lessened, and emotionally he becomes temporarily more stable.

This sequence of events is a commonplace observation, yet heretofore gastro-enterologists have classified this symptom-complex under various headings, giving various diets and medicines. That we can produce temporary relief by these measures goes without saying, but what about the permanent relief? What about the eradication of those etiologic factors which have been so long a thorn in the side of the pure organicist? Patients presenting such a picture comprise a large proportion of those one sees in an office and hospital practice. Many of them are given a diagnosis of gallbladder disease. Because of the similarity of

symptoms one might presuppose this conclusion justified.

In another large group of patients, the symptoms are referable to the upper right quadrant of the abdomen. The so-called dyspepsia, in which the symptom complex of gallbladder disease is an important component, has been brushed aside too lightly in the past. We have now come to suspect dyskinesia of the gallbladder, which has been classified by Westphal as follows:

1. Hyperkinetic.

- (a) Hypermotile. Increased mobility of the gallbladder with rapid emptying in response to fat.
- (b) Hypertonic. Contraction of the gallbladder against spasm of the sphincter, with spastic distention and mild colicky pain.

2. Atonic.

Relaxation or atony of the gallbladder with spasm of the sphincter, causing atonic distention of the gallbladder with mild continuous heavy aching sensation or sensation of tumor.

According to Ivy, the vagi carry afferent impulses responsible chiefly for anorexia, nausea and vomiting when the gallbladder and ducts are distended. The splanchnic nerves carry pain impulses when the ducts and gallbladder are distended. Gastric flatulence is not likely to be due to gastric anacidity and fermentation, but is due to the loss of tone of the gastric musculature and to aspiration, or swallowing of air, which Ivy has demonstrated by the proper distention of the gallbladder in dogs.

With these facts in mind, the function of the gallbladder in man can be studied by cholecystography. A normal gallbladder fills about 12 hours after the oral-administration of the dye. In another two to three hours it concentrates and becomes somewhat smaller. Then after a standard fat meal at the end of one hour, it contracts to one-half to one-third its previous normal size. At this point appear the roentgen deviations from normal which may be classified as dyskinesia. The mechanism of this dysfunction, in the absence of such known etiologic factors as duodenal ulcer, so-called chronic appendicitis, diverticula of the colon, pelvic disease in men or women and urologic disease, has been little understood. A simple organic explanation of this disturbance within the biliary tract itself has long been sought. In its absence

it is not irrational to suspect that this dysfunction results from emotional stimuli sent down to the biliary tree from the higher centers. It is just as reasonable to suppose that emotion can affect that structure as that it can affect sphincter and smooth muscle elsewhere in the abdomen. What the lay person interprets as biliousness may be nothing more than this emotional disturbance of the bile tract, causing associated duodenal stasis, regurgitation of bile in the stomach, bitter taste in the mouth and fullness and distention of the abdomen. Not too infrequently no organic evidence of disease can be demonstrated after exhaustive studies.

This may explain the persistence of symptoms following cholecystectomy in a patient with a non-calculous gallbladder or one not much pathologically changed. The persistence of symptoms in a patient on an adequate medical therapeutic régime without operation may yield to the same explanation. Every clinician is familiar with the relief such patients feel on sedation; yet this temporary relief affords no comfort to those of us who aim at the eradication of the etiologic factors. Even today, with all our laboratory and physiologic data, have we advanced very much in our knowledge of the intimate nature of this mutual influence of bile and psyche? The old classification of melancholia and choleric temperament by Hippocrates indicates a prescientific tacit acknowledgment of the relation of emotions and cholelithic disease. If this hypothetical approach is tenable, we must look to the psychiatrist to classify the emotional stimuli which produce the dysfunction. Only through this combined approach can we hope to make any lasting impression on these symptoms, with restoration of the patients to near normal.

I have left the problem of peptic ulcer until the last, because I know that you are most familiar with this syndrome.

That psychodynamic factors play a role in the life cycle of many ulcer patients has been well substantiated in recent years. Today it is known that no permanent cure of a peptic ulcer patient can be brought about where the unconscious emotional factors have significance in the clinical picture, unless those emotional factors are carefully evaluated, scientifically handled, brought to the surface and properly eradicated. The recurrence of peptic ulcer can usually be laid at the doorstep of the physician who fails to take these factors at face value. Symptomatic relief from any medical or surgical procedure is not enough. However, psychoanalysis, be it brief or prolonged, must

always be combined with adequate medical control. Only through the pooling of all our efforts, somatic and psychologic, may we hope to bring about a permanent cure of these conditions.

It is important in this connection not to make unwarranted generalizations. For example, gastric ulcer frequently presents an entirely different therapeutic problem. Carcinomatous ulcer, or even the remote malignant transformation of a benign to a malignant ulcer, is all too frequent to warrant fiddling while Rome burns. No competent internist, surgeon, pathologist, roentgenologist, and, I might even add, gastroscopist can differentiate between a benign and a malignant ulcer by gross inspection in questionable cases. The final diagnosis must rest on the microscopic evidence.

Therefore, I plead for a great deal of care and circumspection in the conservative care of a chronic gastric ulcer. Until reliable differentiation between benign and malignant gastric ulcer can be made, the surgical approach is preferable to any conservative treatment, medical or psychotherapeutic. The simple, early, uncomplicated gastric ulcers which occur frequently in young persons do not necessarily fall into this category. In such cases there is place for the psychotherapeutic approach, under constant medical vigilance.

Duodenal ulcer, in its life cycle, its healing and its course, may be viewed more optimistically. But here again, when the duodenal ulcer penetrates beneath the mucosa, when it becomes indolent and refractory to medical management, the psychotherapeutic approach is not the answer to our prayer. It should not be considered a panacea. Many patients may have to be first treated surgically and only then handled psychotherapeutically to prevent a recurrence or the occurrence of new ulcers. The careful, honest evaluation of each case on its merits offers the best possible hope of permanency in the cure. One cannot warn too emphatically against making the psychotherapeutic approach a new panacea for all patients.

It is impossible in the time allotted to review the whole subject of the upper abdomen. I have had to restrict myself to those common clinical pictures in which psychodynamic factors may and do play an important role. My main emphasis is on a need for healthy cooperation—for pooling of somatic and psychologic knowledge. Then and only then will the patient get a real service from the medical profession.