

ATONIC DYSPEPSIA

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Of all the diseases of the digestive system, the diagnosis and treatment of the so-called functional disturbances are the most unsatisfactory. This is true from the standpoint of both physician and patient. To the physician they present a clinical picture of such complex composition and vague outlines that diagnosis requires unusual care and study. To the patient the variable course and prolonged duration are exhausting, both financially and physically.

Recent accurate work in diagnosis and treatment of the organic diseases of the stomach has been so fruitful that attention has been focused on that class of diseases to the relative neglect of the equally important functional disturbances. The neglect of the functional diseases by both physician and patient is due to the fact that life is rarely threatened, and acute symptoms are not common; but the importance of such diseases is nevertheless great, because of the prolonged impairment of the patient's social and industrial efficiency.

Physicians of the greatest experience repeatedly state that the more common disorders of digestion are functional in character, and of these the most important is the motor disturbance atonic dyspepsia (gastric atony, the anemic-gastroptotic dyspepsia of Cohnheim, and motor insufficiency of first grade of Boas). Which of the foregoing synonyms is most applicable we need not attempt to decide, provided that when we use our chosen term we have a clear understanding of the clinical entity it serves to designate. Briefly, this is an impairment of gastric tonus and motility, without organic obstruction. There is impairment in motility and delay in emptying, but complete emptying nevertheless occurs. Atony is to be definitely distinguished from motor insufficiency of second grade, in which food remains are still found in the stomach twelve or more hours after a test dinner.

Some writers further divide motor insufficiency of the first grade into (1) atony, in which the stomach does not contract tightly around its contents, and through the weight of normal amount of food becomes temporarily dilated although emptying in normal time (impairment of peristole), and (2) impairment in peristalsis with delayed emptying, though no twelve-hour stagnation or permanent dilation is found. Such writers hold that impairment of peristole (tonus) may exist alone, but is usually associated with some degree of impairment in peristalsis and actual delay in emptying.

Whether atony should be separated from gastrop-tosis is well discussed by Cheney, who says:

The greatest difficulty in diagnosis lies in separating these cases from gastrop-tosis; for neurasthenic symptoms are common to both conditions; and in so-called atony cases, the weak walls permit the greater curvature to sag below normal limits after inflation by carbon dioxide or after the barium meal for roentgenographic examination. There really seems good reason, therefore, to suspect that the cases we class as atony are in fact minor grades of gastric prolapse, and the neurasthenia is a consequence and not a cause.

In my opinion, if it is borne in mind that the essential feature of disease under discussion is impairment of motor function and tonus, without organic obstruction, the position of the stomach becomes a matter of sec-

ondary importance and need only be considered as one of the stigmata of inborn universal congenital asthenia on the basis of which atonic dyspepsia develops, when one or more of the exciting causes are added. Some discussion of these predisposing and exciting factors in the production of atonic dyspepsia is necessary, for if the treatment is to result in any measure of success it must be based on an intelligent effort to eradicate the acquired exciting factors and an adaptation on the part of the patient to those inborn predisposing conditions which cannot be removed.

All the predisposing causes may be summed up under the term "universal congenital asthenia," or the habitus of Stiller, sometimes also known as the habitus of Botticelli, on account of the resemblance to the physique portrayed in the pictures of that artist. The physique is slender and spare. The thorax especially presents characteristic features. The Lenhoff index (that is, the distance from the episternal notch to the symphysis pubis, multiplied by 100, divided by the minimal circumference of the abdomen) is over 80, the costal angle is acute, the tenth ribs often unattached at their costal ends, and the right kidney or both kidneys palpable or movable to a varying degree, with more or less ptosis of all abdominal viscera. The abdominal wall is thin and the muscles relaxed, and a splashing sound is easily elicited. The heart is small and vertically placed, the blood pressure is usually low, the pulse is slow, and the hands and feet are cold.

SYMPTOMS

Temperamentally these patients have characteristics almost as marked and definite as their physical features. They are sensitive, react excessively to normal stimuli, but react inadequately, undertaking more than they can perform, working hard as long as strength lasts, and then, desire having outrun accomplishment, they collapse with some functional digestive disturbance and much mental depression.

With the above-mentioned mental and physical characteristics, the individual may have nothing more serious than occasional complaints of a "weak stomach" till some additional stress is added, which plays the rôle of an exciting cause. This is often some illness such as typhoid fever, influenza, or, in women, a pregnancy or miscarriage. Atonic dyspepsia in its most marked form is especially apt to occur in young adults about the time when they meet the stress of life for the first time, as is seen in young men who work their way through the university or in women who work and also nurse some dependent sick relative. Mental and emotional stress, especially if of a depressing type, is an important exciting cause, as is shown by onset of marked symptoms following some shock, material worries, unhappy love affair, or conjugal infelicity.

The subjective symptoms are so characteristic that a diagnosis can often be made without special examination. A most complete and careful examination should never be omitted, however, for although the dyspeptic symptoms may dominate the clinical field, other conditions, such as incipient pulmonary tuberculosis, chronic appendicitis, or other focal infection, may be present and should of course receive weighty consideration when the treatment is directed.

The most common symptoms complained of are a feeling of weight, discomfort, fulness or pressure, occurring either while eating or soon afterward, the patients often complaining that they feel too full even before they have satisfied hunger, and that the sensa-

tion is present even after soup, milk or a cup of tea and toast. Nausea, sour eructations, dizziness and headache occur, and there is often complaint that food is tasted long after it is eaten. The last-mentioned symptom leads the patient to think that certain foods disagree, with the result that first one article and then another is omitted until the diet is entirely inadequate and malnutrition develops with the establishment of a vicious cycle. Digestants, sedatives and analgesics fail to give relief, unless one of them contains some ingredient that will produce belching, which nearly always affords some temporary relief. The patients complain of a feeling of general weakness, fatigue and lassitude of the body, with mental torpor and inability to concentrate the attention on work, especially for two hours after meals. Actual pain and vomiting very rarely occur in uncomplicated atony. The appetite is quite variable, both with regard to the quality and the quantity of food desired, and the ability to take certain foods varies from day to day. That is, a meal of certain composition can be taken and digested without discomfort on one day, and a few days later the same food will cause marked discomfort. Constipation is common but not constant. After a test breakfast the amount withdrawn is often increased above normal, and after a test dinner there is more definite evidence of impaired motility. In well established cases, food remains are found seven hours after the meal, but the stomach is found empty twelve hours after eating. The acidity is normal or varies only very slightly above or below normal. Blood and other abnormal constituents are absent.

On roentgenographic examination, the stomach is found to be of the fish-hook type, and the gas bubble is large. When examined with the fluoroscope, the barium mixture, without the usual preliminary hindrance to filling in the upper part of the stomach, sinks rapidly to the caudal part, while the pars media remains empty and collapsed. After 1 or 2 ounces of the mixture are taken, the patients often complain of fullness, saying that they cannot swallow any more as the stomach is already full. Peristole, or the ability of the stomach to contract tightly about its contents, is impaired, as shown by a large gas bubble, and peristaltic action is sluggish. The stomach is nearly always ptosed to a varying degree, but it is a noteworthy fact that neither the impairment of motility nor the subjective symptoms are always proportionate to the degree of ptosis. Position is not a measure of function.

There is little difficulty in recognizing atonic dyspepsia if the history is taken carefully and the symptoms studied intelligently. The false diagnosis of gastritis is the error most frequently made, though it has also been treated as gastric ulcer with the result of producing increased debility instead of improvement. The most serious error that can be made is to overlook some underlying disease such as chlorosis, nephritis or early pulmonary tuberculosis.

The course of the disease is variable from week to week, with a tendency to become progressively worse. Physical fatigue and mental stress increase the severity of the symptoms, while rest and relaxation produce some amelioration. Under the most favorable conditions the disease is essentially chronic.

TREATMENT

The chief difficulty encountered in the treatment of these patients is not found in the disease itself so much as in depressing economical or social relations, which

often exert such a definite influence as to merit the title of exciting cause. The problem presented, therefore, is essentially one of adaptation. The physician has the general task of effecting an adequate adjustment between a subnormal individual and the environment.

A special feature of this task is the improvement of nutrition. When it is noted that it is an organ of nutrition that is especially impaired in its function, the difficulties may be realized. Two different methods are employed in treatment. One is the well known rest cure, which consists in changing the whole environment of the patient for the better. All of the exciting and aggravating causes mentioned above are removed by placing the patient at rest in bed in a hospital, or preferably a quiet sanatorium. Not only are friends, relatives and business associates excluded, but even letters and newspapers are forbidden. Contact with the old environment having been thus effectually broken, the patient is fed all of the most nourishing food that can be digested, and an effort is continually made to increase the capacity for assimilation. All hygienic measures that may be of aid are employed. Massage, baths and later moderate exercise, are directed according to the needs of the special case. Finally, and perhaps most important, must be mentioned a skilled and tactful nurse who will not only attend to the actual needs of the patient, but will divert the attention of the introspective patient from within to outward things.

This method, which has been barely outlined above, is usually highly successful—the results are striking, it is a brilliant conquest—that is, till the patient resumes the old life. Then the real test occurs; for if the patient is to take any part in the world, adaptation must take place; not all the handicaps can be removed. Excellent as this method is, it should be reserved for the most severe cases, or those complicated by some other disease. For, although it is so pleasing to physician, patients and friends to see such marked improvement in a short space of time, unless great care is exercised and unless the patient realizes the nature of the problem, all that has been gained while in the sanatorium will be lost in an equally short time, with great disappointment and discouragement to all.

In my opinion the second method, although more difficult for the physician, is to be preferred in all except the most severe and complicated cases, because, although the gain is slow, it is accomplished under working conditions and is therefore more likely to be permanent. In this method of treatment the patient is allowed to continue the normal occupation, business, domestic duties or social activities, but in a slightly modified form. Sufficient time must be allowed for meals, excessively long hours and night work avoided. If possible, an hour of rest should be taken after lunch and a half hour rest before dinner. If the patient is a woman, the household duties may be readjusted and social activities reduced to such an extent as to provide time for one or two periods of rest during the day. It is most important that the meals be taken without hurry and confusion. The excitement, tension and anxiety associated with formal lunches and dinners or with seeing the children off to school, has a most pernicious influence and should be eradicated as far as possible. Dietary errors should be sought for, and when found, corrected. The errors are numerous and peculiar. One patient ate six apples

each night, and another drank milk exclusively. The patients, guided now by the advice of friends or something they have read, now by their subjective sensations, make many experiments, but rarely follow any one course long enough to determine whether it is good or bad. The tendency is toward a diet of soup, milk and broth, and raw eggs. The diet really needed is one of highly nutrient value and little bulk. Since the stomach rebels at a normal amount of food at any one time, the alternative is frequent small meals, with a gradual increase in amount. It is especially important that the lunch be adequate in amount and ample time allowed for eating. Discomfort will be present at first, no matter what food is taken; but with encouragement and intelligent direction, the patient may usually be persuaded to continue to eat adequately, especially if a thorough study of the case has been made before treatment is begun. The forced feeding should be continued despite the discomfort. Only real pain or vomiting should indicate a relaxation and change. The often quoted advice to "take exercise, drink plenty of water, and get the fresh air," is vague, indefinite and often harmful. Since such patients are already below normal weight and find difficulty in taking and assimilating a sufficient amount of food, exercise should be reduced where it is possible, and that taken should be in the form calculated to correct some special weakness or restore normal posture and carriage. When improvement is manifest, exercise may be cautiously increased by allowing participation in exhilarating games and dancing, always stopping short of fatigue and following the exercise with a period of rest.

I lay special stress on exercises associated with mental exhilaration, for the good effect of psychic stimulation on the vegetative system is as potent for good as depression is known to be for harm. In this connection it is often beneficial to explain the condition to the patient. Instead of making them more introspective and "neurasthenic," they are usually pleased by a frank prognosis, and encouraged to learn that there is something they can do personally, and that their intelligent cooperation is of much importance.

An abdominal support is of great value; but in order to be effective it must be carefully and accurately fitted, and the patient must be instructed as to how it is to be applied and what is intended to be accomplished. The fact that such supports do not restore the stomach to what is considered its normal position, as revealed by roentgenoscopy, does not negative their usefulness. The elevation of the stomach as much as an inch often relieves the sensation of weight and discomfort when all other methods have failed. When the nutrition has been improved to such an extent that exercises may be taken, then gymnastics such as already referred to become effective, and the support may ultimately be abandoned.

In every case it is necessary to impress on the patient the importance of maintaining the improved condition of health that has been gained. Any unusual physical or mental strain is very apt to induce a return of symptoms, and since the underlying cause is largely inherent in the physical and mental constitution of the patient, continued watchfulness and care are necessary on the part of both the physician and the patient in order that the nutrition may be kept at the highest possible level.

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RENAL INFECTIONS

A CLINICAL AND BACTERIOLOGIC STUDY*

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The whole question of renal infection is complicated by confusing conditions in many phases of the process. The phase, however, that is most complicated and perhaps least understood is that which deals with the routes by which the infecting organisms reach the kidney. Evidence is presented that demonstrates the blood stream as undoubtedly the route of infection in some instances; again there are equally convincing clinical and experimental facts to favor the more or less direct transmission to the kidney through the lymph stream. During the earlier days, it was assumed that all renal infections were ascending directly from the lower urinary tract to the kidney pelvis and parenchyma by way of the lumen of the ureter. This route eventually acquired the disfavor of most of its supporters, who were drawn toward the more attractive hematogenous and lymphogenous theories. For some time the direct ureteral route was considered mechanically impossible excepting in those instances in which there was obstruction to the emptying of the bladder, resulting in dilatation of the ureter and renal pelvis by infected urine. Therefore the solution of this question for a long time centered around the hematogenous and lymphogenous routes, practically all observers agreeing that the clinical and experimental evidence was sufficient to make one suspect one or the other as a possible route in every instance of renal infection. The recent work of David, however, demonstrates that in experimental work renal infection takes place through the lumen of the ureter in most instances, and this in the presence of unobstructed bladders. Just here the confusing condition rests at present, and its solution appears even more remote than ever.

Regardless of the route by which the infection reaches the kidney, there are certain factors within and outside of this organ that predispose it to bacterial invasion. Infection obviously occurs in many previously healthy kidneys; but a kidney already the site of disease, malformation or malposition is known to be relatively more susceptible. Certain diseases more or less constitutional in nature, such as furunculosis, osteomyelitis, teeth and throat infections, and prostate and seminal vesicle infections, as well as gastro-intestinal disturbances, are observed to be closely associated, in many instances, with a homologous infection of one or both kidneys.

While a complete understanding of the factors brought into play in the pathogenesis of renal infection is not possible at present, it is equally impossible in many instances to comprehend the protean nature of its symptomatology. In the usual, typical case there are certain symptoms presented which, to the knowing observer, are logically associated with the pathologic processes as they exist; there are patients,

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