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Original Articles

THE DIETETIC TREATMENT OF NEPHRITIS.*

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So powerless are we directly to influence the kidneys by drugs that diet becomes of prime importance in our efforts to do our best for patients suffering from disablement of these organs, which play so leading a rôle in excretion.

The principle which should guide us may be expressed in one word—rest, provided that we remember that in the living body rest is a relative term. Absolute rest, as evidenced by cessation of the output of the kidneys, means death before many days. By rest we mean here, of course, such limitation of demand as may promote either complete restoration of functional activity, or such measure of it as may be possible, together with maintenance of the same for the longest possible time and without injury to the body as a whole or to its other important constituent parts.

Acute nephritis is of all grades of intensity, varying from a trivial process, the only danger of which is lest it become chronic, to one which totally and suddenly disables the kidneys. It is probably nearly always the result of an infection in which the kidneys may bear the brunt of the poisoning or may participate in a wide-spread disturbance, perhaps early, but more often later, in the course of the disease.

For twenty-five years it was almost universally considered the best practice to give a rigid milk diet in these cases and to force water. Water, of which milk is, of course, largely composed, was regarded as the best diuretic. Milk, moreover, contains, in an easily assimilable form, every nutritious principle necessary for the maintenance of life. The idea underlying the large ingestion of water was to scour the blocked tubules. But we have learned of late years that in many cases the main trouble lies behind the tubules in the glomeruli, the incapacity of which to filter is, in the acute stage, more likely to be increased than diminished by increasing the blood mass and blood pressure.

Experience teaches us that recovery, often complete and lasting, is the rule in acute nephritis provided that a brief danger period can be tidied over. Starvation is, therefore, now considered the best dietetic treatment of acute nephritis, absolute starvation for a few days in the severe cases with very scanty or suppressed urine and edema of rapid onset and growth. In cases of less severity, the kidneys allowing the passage of water and dropsy not increasing, about a quart of milk can be given daily and the needs of the system eked out by cereals and fats in moderate amount. The phosphoric acid in

the milk which may be difficult of excretion can be precipitated in the intestine by the addition of small quantities of calcium carbonate, as suggested by von Noorden, who also acutely calls attention to the inconsistency of those who absolutely prohibit alcohol but permit koumyss and matzoon. Moderate quantities of alcohol do no harm, he believes, though he seldom uses it. The quantity of food is to be gauged by the degree of kidney disablement as measured by the amount of urine rather than by the amount of albumin, the state of nutrition of the patient and his gastrointestinal digestive power, all combined. As convalescence advances the quantity and variety of food should be increased, including proteids. Animal broths are almost the last things to be allowed, containing little of nutritive value but extractives, which are dangerous to those liable to renal intoxication.

From a practical point of view the dietetic management of acute nephritis and of acute exacerbations of the chronic forms is essentially the same. The general condition of patients suffering from the latter may not tolerate as complete or prolonged starvation as may be safe in the former.

We have learned in these latter days that our knowledge of the real pathology of nephritis is more limited than we once thought it to be and that consequently our classification of its forms is as unsatisfactory as it is tentative. The clinician who, discouraged by his frequent failure to apply the classification of the pathologist to practice, makes a classification mainly on clinical lines, does not help matters much. For our present purpose, therefore, I shall divide the chronic cases into two classes—those cases with and those without dropsy. The second class is chiefly made up of the arteriosclerotic and other cortically atrophied kidneys in which dropsy is conspicuously absent as long as compensatory left ventricular hypertrophy is present. In cases of chronic nephritis with dropsy, especially if the dropsy is mainly of cardiac origin, limitation of liquids is important as a rule.

As far as diet alone is concerned the chief, if not the sole, difference in the treatment of dropsical and non-dropsical cases lies in the degree of limitation of liquids, including water. In some cases, and in some stage of any case, water may be excreted with difficulty by the kidneys and, if the myocardium be at all insufficient, increasing the blood mass merely increases the load of the already overburdened heart.

In the chronic cases we have, as a rule, little hope of true recovery and yet we now and then see such a case as this. A young woman who has had renal albuminuria for more than a year marries. She is cautioned with regard to pregnancy. She nevertheless becomes pregnant before long, passes through it and labor successfully, loses her albuminuria, has a second child and remains absolutely well some years later. In other cases, apparently of the so-called parenchymatous or dif-

* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

fuse type, we note the maintenance of apparent perfect health in combination with a highly albuminous and cast-rich urine for years and years. Apart from these exceptions, however, our aim must be to enable the patient to tolerate his disease as long and as comfortably as possible. Thoughtful attention must be given to the body as a whole, and its nutrition. What doth it avail a man to gain sound kidneys if he lose his life? This means careful individualization of our cases and the effort in each case to adjust the amount, quality and variety of the food to the needs of that particular case at the given time, according to the stage and intensity of the renal process, the condition of other organs and of the whole organism. The best place for printed diet lists so kindly furnished us by the manufacturers of dietetic preparations for Bright's disease, diabetes, gout and other entities, is the fireplace. The physician should be his own prescriber of food as well as of drugs.

The exercise of that form of common sense which, if the ideal be not obtainable, knows how to recognize and secure the best regimen and mode of life possible for the case in hand is no mean help.

In cases with dropsy, with a strictness largely proportional to the degree thereof, a relatively dry diet is advisable. In the cases of contracted kidney, including the "gouty kidney" of the English, I am inclined to think von Noorden right in his opinion that we have erred in the past in forcing water, even in the absence of dropsy, thereby endangering the compensatory hypertrophy of the left ventricle, on the maintenance of which life often depends more than on the kidneys, to the slow wasting of which the system has a chance to accommodate itself.

It seems to me that the main service which von Noorden has rendered is his cogent advocacy of the limitation of liquids. The pendulum had already begun to swing away from an exclusive milk diet in chronic cases, at least, before his views became common property in this country. His varied diet with a fair amount of proteid is in all essentials the same as that which I have advised my patients and taught my students to follow for at least fifteen years past. I never could see anything in the ban put on red meat save an ingenious mode of limiting the amount of meat. He who eats no meat save practically the breast of chicken eats very little, and less as time goes on, so weary of it does he become. Is it not better to talk straight as well as to think straight? I have long been in the habit of allowing my chronic nephritis meat of any color they please once a day, with fish or eggs at the other meals. As to amount I believe that the best results are to be attained only by study of the special case. We have all seen cases in which nephritis has been overlooked for some reason or another and which were suffering from too much food of all kinds. But I am sure that I have seen more patients with recognized nephritis suffering from an insufficiency than an excess of proteids. Cooking should be simple. Spices and condiments may be undesirable and their prohibition involves no hardship, at all events. Green vegetables and fresh fruits in their season are almost without exception permissible, nay desirable. The more perishable fruits, such as peaches and berries, which have traveled long distances to market, are apt to be poor things for anybody. Varieties are selected with more reference to their appearance on arrival than to their digestibility or palatability. I note that von Noorden forbids celery. I do not know how things may be now, but when I studied in Germany

thirty-odd years ago the only form of celery I ever saw on the table was the root. In this country I have seen only the stalk, which, either in the raw or cooked state, I can not think detrimental to nephritis.

The red meat calls up another fad—that of the avoidance of water with meals. Its true purpose may originally have been to limit alike food and drink and thus to reduce weight. But many persons have got it into their heads that water between meals is no longer water. The interdiction of red meat and of water with meals may be an easy way for the physician to attain a certain end. But the easy way is not always the best way, and I believe that we serve our patients, humanity and ourselves better if we avoid shibboleths, even if the so doing involves trouble and time.

Many women and some men seem to have nothing better to do than to exchange confidences—if those things can be called confidences which are openly talked of in street cars or in places of public amusement—as to their ailments, their physicians and their remedies. I recall a story which I heard of the late Dr. H. J. Bigelow, the great surgeon. A woman sent for him and talked for more than half an hour without interruption from him. When she had concluded he remarked: "Well, as near as I can find out, you have sent for me to ask whether a remedy which Dr. A. prescribed for Mrs. B. for a complaint which you have not got would be good for you." This woman had the sense to refer the question to her physician. Some have not, but go ahead and take the remedy. The practice of medicine is even to-day more of a black art than it would be if physicians always thought clearly and took the trouble to explain principles broadly to their patients. Of course, our knowledge is most imperfect and we must often base our action on half or quarter truths, even on what is not the truth although we believe it to be such at the time. But let us recognize that a fraction of truth is but a fraction, and bear in mind the saying credited to the late Speaker (Tom) Reed—"People say truth is simple: half truths are simple but the whole truth is the most complicated thing on God's earth."

I have no personal experience with the restriction of salt in the diet of nephritis. The investigations of Vidal, Javal, Lemièrre Kövesi, Röthe-Schultz, Strauss and others make it certainly desirable that further clinical evidence be acquired as to its value in kidney disease with dropsy. While the reports of the many observers are by no means unanimous, the evidence in favor of a low sodium chlorid allowance is sufficient to make us ask for more light. I am only too conscious of the sketchiness of my remarks on this important subject. The imperfection of our knowledge and the size of the subject render it impossible, for me at least, to qualify or to go into minute detail. Principles are more important and of chief concern to us here.

The leading ones pertaining to the dietetic treatment of nephritis may be stated somewhat as follows:

1. Such control as we may have to-day of nephritis lies in diet and mode of life rather than in drugs.
2. Such drugs as are useful are so in their effect on the general organism or on the heart rather than on the kidneys directly.
3. In all cases of nephritis our broad aim is to spare the kidneys unnecessary work, not forgetting that the urinary is but one of the systems which comprise the body.
4. In acute nephritis, as well as in acute exacerbations of the chronic forms, Doctors Diet and Quiet should work together. Starvation for a few days, pro-

portional to the intensity of the process and the strength of the patient, is the keynote of the dietetic management.

5. In the chronic forms we seek to lengthen and lighten life, an aim often largely within our power of attainment. Especially in the contracted form of kidney disease many years of life, much of the happiness which comes from achievement, days and nights of comfort, may hinge on our skill in adapting sound principles to the particular case and in securing the co-operation of the patient in carrying out the same, persistently, not spasmodically. Dietary restriction should be in the main quantitative rather than qualitative. Alcohol in moderation is not necessarily a poison and may be an aid to digestion.

6. The excess of proteid, not proteid in itself, is harmful to the chronically sick kidney.

7. A varied is more likely than a monotonous diet to promote the manufacture of good blood and thus to promote good nutrition of the body in general and of the myocardium in particular.

8. The amount of albumin is in itself no guide as to the extent of dietary restrictions.

ALBUMINURIA IN NEPHRITIS AND BRIGHT'S DISEASE.*

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Nicholas Cotungo, in the latter part of the eighteenth century, called attention to the coagulable quality of the urine in cases of dropsy, and Richard Bright showed the relation of disease of the kidney to dropsy and albuminuria in the early part of the succeeding century. Subsequently the pathologic observations of Bright, of Rayer and of others seemed to establish the invariable association of these conditions. Pathologists of the new school of cellular pathology confirmed the relationship of albuminuria and dropsy with an inflammatory lesion of the kidney so that in the course of time "albuminuria" and "nephritis" became terms of nearly identical practical significance.

As time went on, however, some of the physiologic chemists found that transient albuminuria or cyclical albuminuria might occur without any evidence of lasting disease of the kidneys. In the ordinary course of practice, however, physicians have looked on albuminuria as significant of nephritis, unless the evidence in favor of some temporary congestive or other condition has been well nigh overwhelming. The determination of the proper relations of these conditions to one another was made more difficult by the classifications suggested by various pathologists and clinical pathologists who sought to distinguish a number of types of nephritis and laid down complicated criteria of differential diagnosis, with the result that practically every form of albuminuria might be made to fall in some artificial group. The more accurate urinary examinations and the more careful medical diagnosis of recent years, however, have established the fact that it is necessary to distinguish between nephritis in the sense of the pathologist and nephritis or Bright's disease in the clinical sense.

It must be recognized that the kidney is a highly differentiated organ subjected to exceptional irritations in its important function of excretion, and that inflam-

matory lesions in the minute pathologic sense may be extremely frequent without of necessity leaving any lasting results. Furthermore, it is obvious that nephritis does not become a condition of grave significance until the pathologic changes have attained a degree of intensity or have involved a proportion of the kidney substance sufficient to interfere with the complex functions of the organ so as to imperil the general health. The presence of slight intertubular exudation, of moderate or even extensive, if uncomplicated, degeneration of the epithelia of the tubules, or of slight alterations in the glomeruli, would not justify a positive assertion that the case was one of Bright's disease in the clinical sense. The distinction, of course, is one of degree rather than of kind, but the point at which I am aiming is to bring out the fact that an excretory organ like the kidney is excessively prone to slight and transient alterations which in all probability will undergo satisfactory resolution without permanent impairment of the integrity of the organ.

Much difference of opinion has arisen on account of this discrepancy between slight pathologic lesions and functional or clinical manifestations. In all of the cases now in mind, albuminuria, the great criterion of nephritis, is likely to be encountered, and yet the pathologic conditions are frequently neither serious at the time nor lasting and progressive in character. It is hopeless to attempt a classification based on minute differences in the pathologic findings, and for practical purposes the old clinico-pathologic classification is still the most satisfactory. According to this, two forms of Bright's disease may be recognized, the acute and chronic parenchymatous nephritis, and a third form of nephritis, somewhat different in its clinical course and effects, chronic interstitial nephritis. Individual instances of the first and second forms vary much in the actual pathologic lesions. Sometimes epithelial degeneration is paramount; at other times exudative changes are conspicuous; changes in the glomeruli are usually pronounced and hemorrhagic processes may be conspicuous. In chronic cases, fibrosis sometimes becomes nearly as extensive as in chronic interstitial nephritis. The pathologic picture, therefore, is variegated in the extreme. Contrasted with these cases and essentially distinct from them is chronic interstitial nephritis. Analogy would indicate that the acute interstitial nephritis of the pathologist, occurring in acute infections and toxemias, might go on to the development of the granular contracted kidney, but, so far as definite knowledge is concerned, it must be recognized that this is probably rarely the sequence of events and that practically chronic interstitial nephritis is usually one of the concomitants and generally a comparatively late one of arteriosclerosis.

At the present time chronic interstitial nephritis is recognized as constituting but a subsidiary part of a more general disease in the majority of cases; while, in older days, it was regarded as an independent condition. According to this later view, polyuria and albuminuria may be regarded as significant merely of a renal form, or a renal phase, of a general vascular disease.

Contrasted with these three types of permanent renal disease, there is a large number of conditions in which the kidney is temporarily involved, in which evidences of renal irritation or inflammation exist, and in which the pathologist might discover some pathologic changes, though the subsequent course is one of rapid resolution. The mere element of speedy restoration is evidently not

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