THE MODERN TREATMENT OF FUNCTIONAL NERVOUS DISORDERS.

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"FUNCTIONAL NERVOUS DISORDER" is a loose and decidedly unsatisfactory term, employed to designate hysteria, neurasthenia, and a number of other closely allied conditions. It is, indeed, rapidly falling into disuse, and its place is being taken by another term more in accord with modern views concerning the nature and etiology of the disorders in question. The newer name is "psychoneurosis," and behind the change in nomenclature there lies a wide-reaching revolution in our conception of these conditions. This revolution in thought, and the radical alteration in methods of treatment which has naturally resulted from it, form the subject of the present lecture.

DEVELOPMENT OF THE CONCEPTION OF "PSYCHONEUROSES."

During mediæval and earlier times the phenomena of hysteria and neurasthenia were explained by conceptions which have now merely a historical interest. Such, for instance, was the hypothesis that ascribed hysteria to the wanderings of the uterus about the body—a hypothesis to which hysteria owes its name. During the nineteenth century, however, the views held with regard to these disorders crystallized into a form consistent with the outlook of scientific medicine, and a conception developed which may be described as follows. Hysteria, neurasthenia, and similar conditions are affections of the nervous system characterized only by alterations in function, and not by any discernible structural lesion, but due to causes similar in kind to those producing other forms of disease. It is to this conception, of course, that the term "functional nervous disease" owes its origin. Now the modern conception of the psychoneuroses departs fundamentally from the view just described in that it believes these conditions to be the result, not merely of causes similar in kind to those producing other forms of disease, but of causes which play a relatively insignificant part in the field of general medicine—namely, mental or psychic factors. The first definite advance in this direction was made by Charcot when he demonstrated the part played by "ideas" in the causation of the symptoms of hysteria. During the last quarter of the nineteenth and the early years of the present century this psychogenic theory, as we may call it, underwent a great development in the hands of the workers who succeeded Charcot, amongst whom may be mentioned particularly Janet and Dejerine in France, Dubois and Jung in Switzerland, and Freud in Austria. The theories and practice of these and other investigators have diverged from one another in so many respects that it is easy to overlook the essential fact that they are one and all built upon a common basis. Nevertheless, this common basis undoubtedly exists, and it is constituted precisely by that psychogenic theory whose advent we have described. It may be expressed as follows.

The psychoneuroses, comprising hysteria, neurasthenia, and other allied conditions formerly termed functional nervous disorders, are the result of causes amongst which mental or psychological factors play a predominant part.

During the early years of the present century the psychogenic theory was adopted by most of the workers who devoted themselves to the study of this branch of medicine, and our experience of the vast crop of functional disorders which developed during the war has so amply confirmed and strengthened it that it has now been accepted by the great majority of those qualified to express an opinion on the subject. It underlies practically all modern forms of treatment, and the consequences of its acceptance are so momentous that it is necessary to grasp firmly its

significance and to appreciate accurately its scope and limitations.

To begin with, it does not mean that psychical causes alone are concerned in the etiology of the psychoneuroses, and that physical causes play no part. On the contrary, such factors as fatigue, the toxic and other effects of illnesses, the physiological disturbances produced by high explosives, may clearly have considerable etiological importance, and one condition of probably very great moment in the production of the psychoneuroses, "constitutional predisposition," can hardly be conceived in other than physical terms. It is only implied that, although both physical and psychical causes may co-operate in producing a psychoneurosis, the latter play an essential part, so essential a part that if they can be removed or modified the psychoneurosis itself will be removed or modified. Nor does the psychogenic theory mean that the causes we now call psychical, emotional disturbances, mental conflicts, and so forth, may not ultimately be capable of expression in anatomical and physiological language. It is only maintained that, in the present state of our knowledge, we can express these processes in psychological terms, and explain them by psychological laws, much more profitably than by the conceptions of anatomy and physiology. More profitably, because by treatment based on these psychological laws we can mould the chain of causation so that the morbid condition disappears, and thereby achieve that practical result which is the aim of all scientific method.

Psychotherapy and its Methods.

If we accept the psychogenic theory of the psychoneuroses our methods of treatment will obviously be profoundly affected thereby, because therapeutics is necessarily dependent upon etiology, and if we regard the psychoneuroses as due in large part to psychical causes, then our treatment must be one which aims at the removal or modification of those causes. Now it is clear that if we have to deal with psychological causes we must employ psychological methods—that is to say, we must practise some form or other of psychotherapy. This recognition of the place of psychotherapy in the sphere of the psychoneuroses constitutes the essential feature of modern methods of treatment.

We must pass on to consider, therefore, the procedures of psychotherapy and how they may be applied to the psychoneuroses. There is a common impression that psychotherapy is synonymous with suggestion, and that suggestion is the only weapon with which we may deal with psychological conditions. This impression is, of course, altogether erroneous, for suggestion is only one weapon, and by no means the most important or the most widely applicable. A more painstaking inquiry into the subject seems to reveal, indeed, a great multiplicity of methods, and a number of schools of thought so widely different from one another in theory and practice that one is tempted to believe that there are almost as many methods as there are writers. We find authors who advocate the employment of suggestion, some employing hypnosis, others suggestion by the aid of electrical contrivances or other means. We find authors who repudiate suggestion as useless or harmful, and who practise persuasion and re-education, endeavouring to attain their ends by logical argument with their patients. Other schools regard both these methods as inefficient, and insist that it is necessary to carry out more or less profound analyses of the patient's mind in order to alter its functioning. Of these latter one school in particular—the psycho-analysts—have devised elaborate procedures, based on certain theories of the nature of mental processes, which they hold to be essential in the treatment of these cases. These divergences in thought and practice, important though they no doubt are, nevertheless are not so fundamental as they at first sight appear to be. All psychotherapeutic procedures are necessarily based on the psychogenic theory we have described; careful investigation shows that they all consist in the employment of a few basic processes, and the differences between the various schools resolve themselves largely into differences concerning the particular causal factors selected for attack. It is obviously impossible in a single lecture to consider in detail the methods and merits of the different schools, and I shall confine myself here to an attempt to set out the essential principles of all psychotherapy, and to illustrate

the application of these principles in certain selected cases.*

THE GENERAL PRINCIPLES OF PSYCHOTHERAPY.

As the object to be attained is the removal or alteration of certain mental factors, it is obvious that every scientifically conceived method of psychotherapy must involve two processes: Firstly, the ascertainment of the particular mental factors responsible for the morbid condition; and secondly, the carrying out of procedures designed to eliminate or modify those factors. These two processes may be termed "analysis" and "rectification."

Analysis consists in deducing the nature of the causal factors from the signs we are able to observe ourselves, and from the information which the patient is able to give us, and it necessarily presumes, therefore, a knowledge of the way in which the mind works, and of the effects which its workings may produce. That is to say, analysis presumes a knowledge of psychology and psychopathology. Sometimes the deduction required is simple, and can be made by the help of the everyday psychology which we all possess; in other cases it is complicated and difficult, and necessitates an expert acquaintance with psychopathological processes. It must be realized that the causes in question generally do not lie on the surface of the mind, but are hidden, not only from our immediate observation, but also from the patient's own introspection. They have to be ascertained by a process precisely analogous to that whereby we deduce, from the signs accessible on the chest wall and the symptoms displayed by the patient, the nature of hidden changes occurring in the lungs. In the psychoneuroses we generally find that the causal factors occur in layers, as it were—that is to say, analysis first discloses superficial conditions which are immediately responsible for the symptoms present, then behind these deeper lying causes, until ultimately we get back to emotional disturbances rooted in the interplay of the great instinctive forces of the mind. How far back in this series analysis has to be carried varies in each individual case, but it is clear that for efficient treatment it must be carried sufficiently far back to enable us to modify the causal chain so that the disorder is no longer produced. It is also clear that without this preliminary analysis, without a reasonable knowledge of the causal conditions present, all attempts at therapy must be haphazard and inadequate.

Rectification, the modification of the causal factors discovered by analysis, may be carried out by the aid of many different weapons. We may endeavour to alter the mental processes responsible for the morbid condition by persuasion and re-education, or we may make the patient clearly cognizant of their nature and action, and teach him to deal with them consciously and efficiently rather than in the haphazard manner which has produced his neurosis. Again, we may press into our service all the emotional forces which can be utilized to modify these processes, either those available in the patient's own mind, such as his ambitions, interests, self-respect, religion, or those which can be applied from outside. These last are practically all included in the conception of "suggestion." Different schools of psychotherapy rely mainly on one or other of these various methods, but the practising physician will do well to regard all of them as useful, and to be employed according to the requirements of the individual case and the end which we wish to attain.

The essential principles of all psychotherapy consist, then, in the elucidation of the psychological factors which play a part in the etiology of the psychoneurosis, and the subsequent employment of every weapon which will serve to modify the patient's mental processes in the desired direction. I shall now endeavour to make clear the manner in which these general principles are applied in practice by the description of some typical psychoneurotic conditions, and the methods of treatment available for them.

FUNCTIONAL DYSPEPSIA.

The first case we will consider is that of a middle-aged woman, who complains that she is only able to take small quantities of milk and fish, and that she suffers from severe digestive disturbances, pain, and vomiting if she attempts a more varied diet. She has lost a considerable amount

of weight. Careful examination discloses no evidence of any organic disease, and we conclude that the condition is purely functional. In our search for psychological factors which may have played a part in its causation we elucidate the following history. Six months ago the patient lost her husband, and she passed at this time through a period of great emotional stress. During this period the digestive disturbances began, and she became apprehensive that some serious organic disease was present. She gradually devoted more and more attention to her digestion, carefully testing and observing the effects of different articles of diet, and cutting off those foods which appeared to produce unfavourable results. Finally she reached her present stage in which only milk and fish are tolerated.

With the aid of some very elementary psychopathological knowledge the genesis of this case can be made clear. During the period of great emotional stress some digestive disorder appeared, owing to the normal physiological effects produced on the secretions by emotional disturbance. The patient's attention became fixed on this phenomenon, and vague apprehensions that some serious disease was present passed through her mind. As a result she began to be preoccupied with the functions of her stomach, and instituted the phase of testing and observation which we have described. Now preoccupation of this kind, with the process of auto-suggestion which accompanies it, not only breeds a conviction in the patient's mind that the digestive organs are deranged, but it actually tends to derange their functions. What should have been a merely transient phenomenon therefore becomes fixed, a vicious circle is set up, and the patient's anxious apprehensions concerning the effects of each article of food inevitably lead to an increasing limitation of diet. Finally, the stomach acquires the habit of only tolerating milk and fish.

In considering what treatment should be applied to this case the "layers" of causes which have to be taken into account, proceeding from proximate to more remote, are, firstly, the habit which the stomach has acquired; secondly, the preoccupations, apprehensions, and auto-suggestions which have produced this habit, and finally the emotional disturbances which have initiated the chain of causation. Clearly we have to deal with these various causes, and generally it will be found profitable to begin with the second group, the preoccupations and apprehensions. For this purpose we may employ "persuasion." The nature of the disorder must be fully explained to the patient, it must be made clear to her that no organic disease exists, that her organs are perfectly normal, but that their functions have been disturbed by the attention to which she has subjected them, and that as a result of this her stomach has formed certain bad habits. When the preoccupation and suggestion factors have been removed by these means, attention must next be directed to the habit factor, and the most suitable weapon here will clearly be "re-education." The digestive organs have to be educated to deal once more with a normal diet. The guiding principle constantly to be kept in view is that the process must be gradual but continuous. To begin with, the patient is given the milk and fish diet to which she is accustomed, but she is informed that meat and other foods will be gradually added with the object of training the stomach back to its former capacities. On the following day a piece of meat the size of a small pea is added to the fish meal. Generally this will be digested without ill effects, but should this not be the case a still smaller piece is employed. On the next day a slightly larger quantity of meat is added, and similar additions are made on each successive day. Other articles are introduced according to the same principle, until a full ordinary diet has been once more attained. Usually this end can be achieved within one or two weeks.

Whether or not it is necessary to deal with the more remote causes, the emotional disturbances ultimately responsible for the condition, must be carefully considered in each individual case. In many instances these disturbances are of a purely transitory character, and here the treatment described will be all that is necessary to achieve a satisfactory result. Occasionally, however, emotional factors of a more active and persistent type are present, and these must then be traced out and adjusted before a stable cure can be effected.

A word of warning may be given here with regard to a

* The relations between the various schools of psychotherapy have been dealt with in a paper by the author entitled "The Methods of Psychotherapy," *Proceedings of the Royal Society of Medicine*, 1918.

danger constantly to be kept in mind by every practitioner. Psychogenic disorders are not only capable of being favourably influenced by suitably adapted psychological methods of treatment; they are also capable of being unfavourably influenced by pernicious psychological factors carelessly and unthinkingly introduced by the practitioner himself. This danger is very real in cases of the type just described. Suppose, for example, that we submit our patient to frequent elaborate examinations without assuring her after each such examination that its result conclusively shows that no organic disease is present, that we discuss before her the possibilities of ulcer or carcinoma, and that we then subject her to a carefully regulated diet and a complicated drug therapy. It is easy to see that treatment of this kind, so far from removing the psychogenic factors responsible for the condition, will directly enhance and strengthen them. The patient's apprehensions that she is really suffering from organic disease will be confirmed, the preoccupations will be intensified, the symptoms will become more pronounced, and the difficulties of subsequent rational treatment greatly increased.

CONVERSION HYSTERIA.

The name "conversion hysteria" is applied to a group of cases characterized by obvious bodily disabilities, including such conditions as functional anaesthesias, paralyses, contractures, morbid postures and gaits. I will select for examination a typical case of hysterical mutism, a disorder which is to be regarded as an instance of functional paralysis.

A soldier was knocked over and partially buried by the bursting of a shell, but did not sustain any discernible injury beyond a few bruises. When extricated he was conscious, but dazed and unable to speak. The confusional condition rapidly cleared up, but the inability to speak has persisted, and exhibits the well-known characters of hysterical mutism. The patient understands everything said to him, and can write, but he is unable to make any articulate sound, although he can move his lips, tongue, and so forth, in any way required of him.

If we investigate the psychogenic factors responsible for this condition, we find that the proximate cause is the existence in the patient's mind of a certain conviction. He is convinced that he cannot speak, and the actual inability to speak follows from the conviction by a simple and direct psychological process. Behind this proximate cause there lie a series of more remote causes comprising emotional disturbances of various kinds, ultimately rooted in the great instinctive forces of the mind. The nature of these emotional factors cannot be dealt with here in sufficient detail to enable them to be reasonably understood, but it may be said that in war psychoneuroses of this type the predominant factor generally consists in an inability on the part of the patient to adapt himself to the situation in which he has to exist. This situation stimulates intensely the great forces which may be summed up as the instinct of self-preservation with its concomitant emotion of fear. These forces, whose unhindered action would lead to the individual promptly removing himself from the place of danger, are opposed by other almost equally powerful forces—duty, self-respect, discipline, and so forth. There thus arises an intense mental conflict, and this conflict, the manner in which it affects the mental organism, and the patient's inability to deal with it satisfactorily, form the more fundamental causes responsible for the patient's breakdown.

These two groups of causal factors—the conviction in the patient's mind that he is unable to speak and the more remote emotional disturbances just described—constitute the etiological conditions against which our treatment must be directed. The proximate cause, the patient's conviction of his disability, can be dealt with by various methods, the object of all being to substitute for the pathogenic conviction one of precisely opposite character—that is to say, to replace the patient's belief that he cannot speak by the belief that he can speak. Suggestion, for example, may be employed, either by hypnosis or some other means. The patient may be hypnotized, and while in this state the suggestion may be conveyed to him that he is now, and will continue to be, able to speak; or he may be informed that an electrical current will be passed through his neck, and that immediately this is done he will recover his voice. In either case, if the suggestion be successful, the conviction that

he can speak is implanted in the patient's mind, and directly this is achieved the disability will disappear. Or, again, this end may be attained by the use of persuasion and re-education, the procedure then being as follows: It is explained to the patient that examination has shown that all the organs of speech are perfectly healthy, that he has merely forgotten now to use those organs, and that it is proposed to teach him how to recover that use immediately. He is then told that if he fills his chest, opens his mouth, and blows out his breath, he will make the sound of "ah." This result follows, of course, inevitably. The sound of "e" is next produced by instructing him to open the lips, approximate the teeth, place the tongue against the lower teeth, and again blow out the breath. Other vowel sounds can be similarly taught, and one then passes on to consonants. The patient is told to close his lips and then to separate them smartly, blowing out the breath at the same moment, thereby producing the sound of "pah." By these methods the patient can be taught to make any required sound, but it is not, of course, necessary to go through all the sounds in the English language. It must always be remembered that our aim is merely to destroy the patient's conviction that he cannot speak. This conviction is shaken directly he makes the first articulate sound, and it is generally removed altogether by the time he has articulated a few vowels and consonants. He then realizes that his disability no longer exists, and the capacity for speech returns at the same moment. The method of treatment described tends to produce in the first place an aphonic and not a voiced speech; but this defect can be remedied by the employment of similar means, and must not on any account be allowed to persist.

The proximate cause of the disorder having been dealt with in one of these ways, the question arises as to whether, and to what extent, it is necessary to attack the more remote causes. The nature of the latter have been already explained, and unless they also can be removed, it is obvious that the destruction of the proximate causes, the breaking of the chain of causation at its penultimate link, cannot effect a complete and permanent cure. The symptoms will perhaps disappear for the time being, but the original source persists and a fresh outbreak of the same or similar symptoms is always possible. Clearly, therefore, efficient treatment requires that these underlying emotional disturbances should be adjusted. Time does not permit of any detailed description here of the methods by which this end may be attained, but it is evident that the conflict described in a former paragraph will have to be investigated and an attempt made to adjust the warring forces involved. This may be done partly by making the nature and action of these forces clear to the patient himself and instructing him how he may control them consciously and deliberately, partly by pressing into service all those emotional forces in the patient's mind—self-respect, ambition, interest, and so forth—which can be used to aid that control. In many cases of the type now under consideration we shall find that the patient's constitution is such that it cannot deal with the stresses of war, and adjustment will then only be possible by altering the environment in which he has to live—that is to say, he must cease to be a soldier.

The principles dealt with above enable us to understand the well-known clinical observation that, though it is easy to remove hysterical symptoms, it is difficult to ensure that relapses and the outbreak of fresh symptoms do not occur. They provide, moreover, a gauge by which we may measure the merits and demerits of rival methods of treatment, according as they endeavour merely to remove the patient's symptoms, or to attack the more fundamental causes of which the symptoms are only an expression.

ANXIETY NEUROSES.

We may now pass on to consider a type of case for whose treatment a more advanced knowledge of psychological processes is required, and we may select for this purpose another example of a war psychoneurosis, of a kind to which the name "anxiety neurosis" has been applied.

A soldier after some months of service at the front, including several episodes of a particularly distressing character, breaks down, and when we see him some weeks later presents the following clinical picture. As he enters the room we observe a generalized tremor, much accentuated by any emotional disturbance; he starts violently

when the door shuts behind him, and we note that the palms of his hands are wet with sweat. He tells us that his sleep is disturbed by dreams, in which he is once more fighting in the front line, and from which he wakes in terror. These dreams are a frequent feature of the war psychoneuroses, and have been generally christened by the name of "battle dreams." The patient complains, moreover, that he is unable to concentrate his thoughts, and that he becomes promptly fatigued whenever he attempts any physical or mental exercise.

When we investigate the psychological factors responsible for this condition we do not find any "conviction" comparable to that which constituted the proximate cause in the hysterical case previously considered. On questioning the patient, however, we soon discover that he displays a certain noteworthy attitude towards the experiences he has passed through in the war. If we ask him whether he ever thinks of his life in France, he promptly replies that he does everything he possibly can to avoid thinking about it. He carefully occupies his mind with other things to prevent the memories of what he has endured entering consciousness, avoids any newspapers or other literature which might recall them to him, and turns away whenever his comrades introduce the subject of the war. He points out, moreover, that if in spite of his efforts the forbidden memories force themselves upon him, he immediately becomes agitated, tremulous, and terror-stricken. In a word, he finds that certain memories are inexpressibly painful to him, and he therefore endeavours to keep them at arm's length and so far as he can to forget them.

Now this attitude is not a mere symptom to be added to the list of those already described; it is an actual cause of the latter. In order to understand how this may be it will be necessary to devote a moment to the consideration of certain psychological principles. When the memory of an important emotional episode is thrust out of consciousness it does not thereby cease to exist. It is merely driven beneath the surface of consciousness, as it were, imprisoned in the depths of the mind, and prevented from entering consciousness by the interposition of a barrier. This barrier is not, of course, an actual entity, but is constituted by those psychological processes of repulsion, occupation of the mind with other things, and so forth, which have already been described. The barrier prevents the direct entry of the offending memories into consciousness, but it cannot prevent them from influencing consciousness indirectly, and thereby producing certain characteristic symptoms.

Applying these principles to the case under consideration the actual state of affairs may be stated as follows: The patient's war memories are subjected to the "repressive" process which has just been described, and are thereby prevented from entering consciousness directly. Nevertheless, certain elements of the offending memories influence consciousness indirectly, and are responsible for the tremors and "jumpiness" which we observe in our patient. These last may be regarded, of course, as physiological manifestations of the fear which attaches to the buried memories. Again, although the barrier can be maintained during the hours of waking activity, it is inevitably relaxed so soon as the patient composes himself for sleep, the memories emerge into consciousness, and the resulting emotional agitation accounts for the patient's insomnia. When sleep does finally supervene the barrier is almost completely removed, and the released memories are thus free to provide the material of the well-known battle dreams. Lastly, the exhaustion of energy produced by the lack of harmony and conflict in the patient's mind explains, in some part at least, the rapid fatigue which arises whenever any mental or physical exercise is attempted.

So soon as the existence of this mechanism has been ascertained the main indication for treatment is at once obvious. If the repression is responsible for the symptoms the repression must be removed. In the first place, the state of affairs must be fully explained to the patient, and he must be made to understand that his attitude, although apparently dictated by common sense, is really the immediate cause of his troubles. The explanation is not difficult, and can be put into language easily comprehensible to men of mediocre intelligence and education. The next stage is to instruct the patient how this attitude may be corrected. The objects to be attained are clearly the abolition of the barrier and of the repulsion which has

produced that barrier. Translated into everyday language, this means that the patient must get used to his war memories, so that he may regard with comparative equanimity those past events whose recollection now fills him with anguish and terror. He must be persuaded to describe them fully to the physician, to face them squarely rather than to shun them, and to accustom himself to discuss them with his comrades. To begin with, the process will be extremely painful and distressing, but this aspect will steadily diminish with the continuation of the treatment. The abolition of the repulsion is aided materially by constantly impressing upon the patient that the events in question are past and are now merely memories, and by endeavouring to elicit every circumstance which will place them in a more favourable and less distressing light. That is to say, every means must be used to alter the perspective in which these memories are regarded, so that they will no longer be outlaws in the mind, as it were, but will fall into their proper place in the mental structure.* When this reintegration of the repressed elements has been attained, when the patient can describe and discuss the events of his war experience with equanimity, then the symptoms due to the repression will naturally disappear.

In cases of this type it will be found that, behind the proximate causes just dealt with, there lie more remote causes of much the same nature as those elicited in the hysterical case described in a preceding section. Here also these causes must be taken into account and suitably treated if a satisfactory result is to be attained. Finally, a process of re-education must be carried out, in order to train the mental and physical activities gradually back to normal functioning.

GENERAL PRINCIPLES.

It will be observed that two out of the three cases which have been selected for description are war cases. This circumstance is not entirely fortuitous. Owing to the comparatively simple character of the psychogenic factors in the pure war psychoneuroses, and the corresponding simplicity of analysis and treatment in these cases, they are admirably adapted for a demonstration of the essential nature and principles of psychotherapy. A large number of the psychoneurotic cases met with in civilian practice have a far longer history, and a correspondingly more complicated etiology and structure, and their treatment therefore requires more elaborate methods and a more extensive knowledge of psychopathology. Nevertheless, the broad principles which have been described hold good here also, and so long as they are constantly kept in view the problem presented by each individual case can be satisfactorily attacked.

A careful examination of the cases considered in this lecture will disclose the fact that in each instance the patient has failed to adapt himself adequately to a particular situation, and the psychoneurosis has arisen because the psychological factors in that situation have been wrongly adjusted. This is the characteristic feature of all the psychoneuroses, both of war and peace, and once it is grasped it becomes clear that the only rational treatment for these conditions must consist in the elucidation and adjustment of the factors which are at fault. In the light of this principle, the futility of rest cures and voyages is immediately apparent, for the patient's troubles are in his mind, and he takes them with him wherever he may be sent. A rest cure may be an excellent adjuvant measure, and a voyage may be a valuable help in convalescence, but unless the factors responsible for the disorder are properly dealt with, both are worse than ineffectual. The physician who undertakes the treatment of these cases must not be satisfied until he has ascertained the situation to which the patient has failed to adapt himself, the psychological factors which have conditioned the lack of adjustment, and the mode in which these factors have acted. If I were required to sum up in a sentence the essential features of the modern treatment of functional nervous disorders, I should say that they consist in taking into account not only the physical antecedents of the patient, but also his psychological antecedents, and in the devising of methods whereby the morbid psychological processes can be rectified.

* For a fuller description of this method of treatment see W. H. R. Rivers, *Repression of War Experience*, *Proceedings of the Royal Society of Medicine*, 1918.

In conclusion, it may be pointed out that in the space of a single lecture it has naturally been impossible to attempt more than a sketch of general principles, and the cases selected for description have been dealt with in an unduly simplified manner in order to bring into relief the facts essential for our purpose. Throughout the lecture, moreover, emphasis has been laid on the psychological factors in causation and treatment, because the recognition of their importance is the keynote of modern methods of treatment.

This must not be taken to mean, however, that physical

factors are of no account in these disorders. On the contrary, they must be carefully estimated and suitably treated. Recent researches in endocrinology promise that in the future a flood of light will be thrown upon the nature of the physical factors which play a part in the psychoneuroses, and in particular upon that vague but vastly important thing we call "constitutional predisposition." In this field, moreover, it seems possible that the physiologist and the psychologist will ultimately find a meeting place in which they can join hands and adjust their claims.

APPENDICECTOMY BY A NEW ROUTE.

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THE operation here described is designed for the removal of the appendix vermiformis through the right iliac fossa in cases where no general exploration of the abdominal cavity is called for—that is, in acute cases rather than chronic. The method is a muscle-splitting one, and has proved so successful that I employ it in preference to all others. Indeed, its advantages, anatomical, surgical, and clinical, appear sufficient to justify its general adoption in suitable cases as a substitute for the procedures in general use.

I.—INCISION AND APPROACH.

The incision used for opening the abdomen may from its anatomical situation be described as the parailio-spino-inguinal (or ilio inguinal for brevity's sake), and is made half an inch or less internal or medial to and parallel with the anterior superior spine of the ilium, or as near to it as practicable. The anterior iliac spine, a constant and definite landmark, which is easily felt or demonstrated however obese the subject, forms the centre. The cut is carried above and below this point to an equal extent and parallel with the iliac crest and spine and the attached inguinal (Poupart's) ligament. The length of the incision varies with the size of the individual, but usually need not be longer than $2\frac{1}{2}$ in., although it may be extended in either or both directions if required.

The cut at once divides the skin, subcutaneous fascia, and aponeurosis of the external oblique muscle to its full length, when an assistant, armed with a pair of blunt rectangular retractors, holds the edges apart, whilst the muscular fibres of the internal oblique muscle are defined and exposed to view. At this stage a white line of varying distinctness may usually (roughly in about 58 per cent. of cases noted) be seen passing across the muscle almost horizontally, in a direction from the anterior superior spine of the ilium to the middle line of the body; this line, which is bloodless, indicates a natural division of the muscle into an upper and lower section. With this line as a guide (the same direction must be followed when no line is visible) the thick fibres of the muscle are incised and then separated with the aid of a blunt instrument such as a Kocher's director, or by the gloved index finger (Fig. 1). The subjacent transversalis muscle is then similarly treated, its fibres being separated at the same time and by the same manoeuvre to the full extent allowed by the skin incision. As soon as the fibres of these horizontal muscles

FIG. 1.—Separation of the fibres of the internal oblique muscle.

FIG. 2.—Delivery of the caecum and appendix through the wound.

have been freely separated and any bleeding stanching the retractors are removed and replaced at right angles to their former position so as to pull and hold the fibres apart, thus exposing the transversalis fascia. This fascia, usually thin, may at times be somewhat thickened and resistant, and through it the exploring finger ascertains the precise condition of the subjacent peritoneum. Up to this stage the procedure is identical for all forms and stages of appendicitis, whether acute or chronic, simple or "interval," with or without abscess. In uncomplicated cases, and whenever there is no evidence of suppuration, as may usually be determined by palpation of the peritoneum through the transversalis fascia, this fascia and the peritoneum are seized with blunt-pointed catch-forceps and divided in a direction parallel with the skin incision, medial or internal to the reflection of the parietal peritoneum on to the iliac fossa, deep to and parallel with the inguinal (Poupart's) ligament.

Where, however, an abscess is present or suspected, it is safer to turn the peritoneum inwards or medialwards from its seat of reflection behind Poupart's ligament and to open it posteriorly from the iliac fossa. The transversalis fascia and peritoneum are usually divided together in a line parallel with the skin incision, but they may be cut transversely as with the deep muscles, if the incision is likely to require enlargement. The peritoneal opening should be made as free as the skin and muscle divisions allow, and the edges caught and held apart securely with a pair of blunt-pointed catch-forceps. These instruments are attached near to the extremities of each edge, and serve to retain the cut edges of the peritoneum, acting as retractors during the subsequent manipulations. The forceps should be blunt, lest they wound the bowel; moreover, unless the peritoneal opening is ample there may be difficulty in replacing the viscus at a later stage. When the abdomen is opened, the viscus first seen is generally (86 per cent. of cases noted) large intestine, either the first part of the ascending colon or, less frequently, the caecum. Except in children and in abscess cases the omentum or transverse colon are rarely seen, still less often is the small gut observed, except in cases of excessive intestinal paralysis and distension due to a generalized septic peritonitis.

II.—TREATMENT OF THE APPENDIX.

The large intestine is now seized and drawn gently upwards through the wound, its anterior muscular band serving as a guide, until the caecum with its appendix is delivered through the wound (Fig. 2). When the appendix happens to be retrocaecal—a condition more frequently found than is reported—and is therefore sessile, or is otherwise adherent so that it cannot be delivered complete through the opening without risk or injury, it is wiser to detach the caecum at once, to deliver it through