Warthin¹¹ has discussed this factor and speaks of it as the Graves' constitution, but at present it must be regarded as theoretical, because it cannot yet be recognized in the absence of the disease. It appears as if this factor is strong in some patients so that no other factor is needed to produce the disease, but that in other patients it is less strong, and in them some additional factors are necessary. The prognosis will be influenced by these considerations, and the restoration to health, even after thyroidectomy, will be less complete the stronger the constitutional factor. In some of the cases in which the result is recorded as "poor," the patients gave histories of nervousness and excitability all their lives, and appeared to have been below the normal standard of physical efficiency before the onset of symptoms of thyroid intoxication. This was clearly a factor in the results in the two following cases:

Mrs. A. B., aged 55 years. Nervous and excitable all her life. In 1923, aged 47 years, developed exophthalmic goitre; symptoms more severe following tonsillitis in 1922. January, 1923, tonsillectomy; continued to be nervous and excitable, and unable to do her work. April, 1928, B.M.R. +20 per cent., very emotional and mentally depressed, and these symptoms were more prominent than those of thyroid intoxication, which were mild. April, 1928, partial thyroidectomy. 1931, improved, no evidence of thyroid intoxication, but always grumbling and unhappy, and not able to do her house-work.

Miss F. B., aged 46 years. Never strong, always tired, numerous fainting attacks, frequent tonsillitis. In 1905, aged 20 years, developed exophthalmic goitre; remissions and relapses frequent, and very emotional. 1926-1929, repeated attacks of tetany caused by emotion, but no disturbance of calcium metabolism, no alkalosis. July, 1926, tonsillectomy; July, 1929, B.M.R. +40 per cent., x-ray treatment; August, 1920, B.M.R. +30 per cent., partial thyroidectomy. 1931, no tetany, but emotional storms, and unfit for any exertion.

TREATMENT

From the analysis of the results of treatment in the 136 patients, who have been carefully studied and followed, it seems clear that surgical treatment is indicated in most cases severe enough to be admitted to the wards of a general hospital. Of those selected as suitable for treatment without operation, nearly a third relapsed and died after discharge from hospital, so that it would appear difficult to decide when it is safe to allow such cases to return home away from close observation and experienced treatment; and the logical conclusion is that it is safer to operate at the earliest suitable opportunity than to hope for spontaneous recovery. So long as cases present themselves for treatment at the stage in the disease at which they now come to us, some means of reducing the amount of functioning thyroid tissue is necessary to save life and restore efficiency. As alternatives to surgical treatment there are x rays and radium, but both methods require such long courses of treatment, and are at present so comparatively uncertain in their results, that operation by a surgeon with special experience of operations on the thyroid gland is preferable, to save time and to avoid the risk of serious relapse during the course of radiation. Unfortunately, such surgeons, in whose hands the operative treatment has a negligible mortality, are to be found only in a few centres in this country. Even in their hands the proportion of "poor" results is greater the longer the duration of the disease and the older the patients; and it would seem unnecessary that they should be called upon, as they are at present, to perform an extremely difficult task when an earlier operation would be easier and safer, and the result for the patient would be better. If treatment by x rays or by radium were more easily controlled and more certain, these difficulties could be to a great extent avoided by commencing treatment as soon as possible after the diagnosis is made, by utilizing either x rays or radium

to diminish the amount of gland tissue, by giving iodine to reduce the intoxication, and by removing any causal factors that can be discovered. If this were done while the case was mild and the patient still fit for work, the delay in obtaining the desired result, due to the longer time required by radiation as compared with operation, would not be important, and the number of late cases and severe cases, which can only be treated efficiently by means of thyroidectomy, would be so reduced that the few surgeons of sufficient experience could attend to them. Perhaps treatment by radiation is already sufficiently advanced to permit of this policy being adopted, and such treatment should certainly be tried if the case is seen early, and if the best surgical aid is not available.

CONCLUSIONS

Cases of thyroid intoxication, or toxic goitre, should be treated as early as possible by removing any causal factors that can be discovered, by the administration of iodine, and by reduction of the amount of functioning thyroid tissue. This can be accomplished with the greatest certainty by operative treatment, but if a surgeon with special skill and experience in such cases is not available, treatment by x rays or radium should be tried while the case is still mild and the patient able for work.

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PSYCHIC PAIN AND THE PSYCHOSES*

BY

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Taking the psychoses as a whole, the psychiatrist can scarcely fail to gain the impression that external stresses play but a relatively small part in their development. Financial disaster, the loss or inaccessibility of a beloved object, persistent domestic strain, the pangs of physical disease, the loss of social esteem, and even the disgrace of imprisonment for some delinquency—such traumatic events might reasonably be expected seriously to upset the psychic equilibrium; but generally speaking they do not have this effect. They may, and often do, bring about enduring psychic pain, and tend, no doubt, to diminish efficiency; but they are usually met with courage, endurance, or resignation, for life has to be accepted as it is; we know that it can never be moulded after the pattern of our own desires. Should, indeed, a psychosis develop under severe stress, some pre-existing abnormal sensitivity or some inadequacy in meeting the demands of everyday life would probably be revealed in the history. A negative history of recent trauma does not, of course, exclude the possibility that external events may have taken a part in the causation of a psychosis. In all cases it is necessary to make an exhaustive inquiry into the past, with a view to discovering the extent to which the symptoms manifested can be traced to subtle

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environmental influences which have cramped the instinctive-emotional life, with the result that the patient has become incapable of meeting the stresses of everyday existence. Especially is investigation directed to the early life, when the seeds of a neurosis or psychosis are apt to be sown by injudicious (though, perhaps, well-meaning) parental handling of the child. Curiously enough, it is not necessarily the stern parent type which does the most harm, but rather the over-indulgent; since the latter gives the child an entirely wrong impression of the actualities of life. The children of rigid Victorian parents often emerged from the ordeal of their upbringing as reasonably adjusted and efficient personalities, with an elastic and tolerant outlook.

PREDISPOSITION TO PSYCHOSIS

These psychogenetic studies have both scientific and therapeutic value, and it is in no sense the purpose of this brief communication to belittle their importance. At the same time, we know that many individuals have been submitted (perhaps from early life) to conditions quite as traumatic as those which may be discovered in the history of some psychotics, without, however, exerting any notable effect upon their capacity to make a normal adjustment to life. We are thus again driven to the conclusion that there must be some predisposition in the subjects of a psychosis which renders them peculiarly liable to succumb to the inevitable stresses of life; and it is the purpose of this paper, to consider, in very general terms, the nature of the defect in these patients which favours the development of a mental illness.

PSYCHIC PAIN

It is necessary to recognize that psychic pain, discomfort, or "unpleasure," is an inevitable and necessary element in life. It may, indeed, be said that consciousness came into the world as pain. In plants it is unnecessary to assume the existence of consciousness, since in these the conative impulses, which are mainly concerned with assimilating the material necessary to the metabolism of vital existence, do not take the form of seeking movements but "of a continuous appetite continually satisfied." It is otherwise in motile organisms. Writing on the psycho-physiology of hunger, Turro observes that the discomfort of hunger or thirst has for its cause the impoverishment of the internal *milieu*, and, in consequence, the distress of the cells of the organism. The internal *milieu* is not an inexhaustible storehouse; its supplies have to be continually renewed, and a time arrives when either the quality or the quantity of the internal resources is insufficient to supply the cellular avidities; the unique means, then, of repairing the deficit is to seek for the reincorporation within itself of the elements which it lacks. "At this stage," to quote Turro, "this psychic tendency, which impels to seek without what is lacking within, is what constitutes the feeling of hunger—an echo of physiological distress and, at the same time, the dawn of psychic life." Thus psychic pain or discomfort—pure feeling without cognition—is an essential, primordial, indispensable, and innate element in the process of life. It is the symbol of some physiological change within the organism, an impeded conative tendency, or an alteration in the environment; and its function is to stimulate action which will bring about a restoration of the normal equilibrium. Discomfort, and not pleasure, is the primary stimulus to vital activity. Pleasure is essentially a negative stimulus in that it either does not stimulate movements, or, if it does, only such as tend to prolong the present state of affairs. The whole of life may be described as a series of behaviour cycles, beginning, as we know, at the moment an infant is ushered into the external world, with a state of discomfort, and ending, if the actions performed

are successful in furthering the conative impulses, in a state of pleasure. Such is the affective substratum of living reaction; a simple enough mechanism it would seem, but, nevertheless, it is upon its adequacy that the harmonious development of the psyche would seem to depend.

The enormous development of the intelligence and reasoning power has succeeded in opening a wide chasm between man and animals, but in spite of our impressive intellectual achievements and discoveries we have never been successful in making life an easy matter. It has merely become more complicated. No doubt human beings have more comforts, amenities, and diversions than their forefathers, but it is a pure illusion to suppose that the difficulties of life will be diminished by making it our sole concern to see that external conditions are favourable. The difficulty of life, from the amoeba up to the human being, is so obviously a constant factor, consisting as it does solely in the effort which is indispensable to being alive at all.

THE IDEAL THERAPEUTIC AIM

Thus it would appear to be part of the scheme of things that life should manifest itself as a struggle to maintain, restore, and reproduce itself, in an environment which inevitably must include forces inimical to its continuance. Even supposing that external events played an important part in the causation of the psychoses, it is evident that but little could be done in the way of preventing these illnesses. It is true that psychotherapy often resolves itself into the provision of an artificial environment, in which the patient can be relieved of the inevitable tension of daily life; but this cannot be described as curative treatment. The ideal therapeutic aim is to disentangle the inner life of the patient so that he is enabled to meet the difficulties of life with confidence, courage, and good humour.

THE SCHIZOPHRENIC STATE

Unfortunately, such treatment is limited in its scope, and is inapplicable to the schizophrenic patients who comprise the majority of the chronic cases in our mental hospitals. In these patients we have an inadequate and diseased conative-affective mechanism—a mechanism which I have described above as the essential, primordial, and indispensable element of life. They are lacking, indeed, in the ability to maintain, restore, or, in many cases, to reproduce themselves—for adolescence, betrothal, marriage, or child-bearing often produces a psychosis. The picture of regression presented by a group of advanced schizophrenics is a peculiar one indeed. These patients have altogether renounced the pain and the struggle of life. They live in a world of strange fantasies, shun social contacts, are indifferent to their environment, comfort, or appearance; many have to be dressed and fed; and were it not for nursing care they would cease to exist. They live in a state of complete spiritual isolation from their fellows; they have lost all appreciation of values; for wealth, success, knowledge, art, culture, and even love, mean nothing to them.

Some years ago, Jung suggested that the products of schizophrenic thought activity, so difficult to understand, so twisted and distorted, resemble very closely the normal dream activities. He expressed the view, indeed, that if the dreamer should go about performing actions we should have the clinical picture of dementia praecox. This observation is particularly interesting, as recent studies at the Maudsley Hospital have led to the conclusion that the physiological condition in psychotics resembles that obtaining during sleep in the normal individual. This work was dealt with briefly in the paper by Dr. Marsh. Now, however grotesque the dream, and however impressive or ridiculous the part played by the dreamer, the

latter, as far as I am aware, always remains conscious of his own identity. It would seem that the schizophrenic is in this respect much the same as the dreamer. That is to say, hidden by the delusional fantasies is the normal ego which, on occasions, is apt to reassert itself. Every psychiatrist has seen this happen when a patient is visited, in bodily illnesses, or in cases that unexpectedly recover. In these cases it is often found that the patient has an astonishing memory of all that has taken place during the period of his psychosis. It has always seemed to me to be rather curious that the highest and most recently acquired cognitive functions—mental efficiency and memory—should be preserved in these cases. One might think that, in view of educational pressure and the dreadful examinations which young people are called upon to pass, a kind of premature mental enfeeblement might result in many patients. Yet this is not the form taken by adolescent cases, many of which occur in those of brilliant intellects to whom the passing of examinations is mere child's play. What we see in our adolescent patients is not the deterioration of the most recently acquired functions, but rather of the oldest and most essential functions—namely, those of instinct and feeling, the inharmonious development of which is responsible for the symptoms exhibited.

INTELLECT AND INSTINCT

It has to be recognized that intellect, as distinguished from feeling and emotion, is not an indispensable element of life. Intellect is more or less of a luxury, and a high intelligence is of less importance than a stout heart—that is to say, a vigorous, balanced, and harmonious affective life. In view of the considerable incidence of mental disorders in civilized communities, both within and outside the mental hospitals, it is perhaps justifiable to inquire whether there is not some increase in the incidence of those who are the subjects of some constitutional vitiation of the organic processes concerned with the development of the "springs of action"—that is to say, of the instinctive-emotional life.

PUERPERAL SEPSIS: THE IMPORTANCE OF EARLY TREATMENT

BY

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Anyone, seriously engaged in the study of puerperal sepsis, who possesses experience of a large number of cases, must realize the value of early treatment. The recognition of this fundamental principle in respect of other diseases—for example, appendicitis, intestinal obstruction, syphilis, and diphtheria—has been the one and only means of reducing mortality from these diseases.

In the treatment of puerperal sepsis the method of glycerin irrigation, as practised at this hospital, has been proved to be entirely harmless to living cells, and has established its claim to be regarded as the most efficient remedy at our disposal. Since this is so, why should not this method of treatment be applied at an earlier stage, in the ante-natal period for example, as well as on a larger scale at an earlier period in the puerperium, instead of postponing treatment until the uterine tissues become hopelessly infected and the blood stream invaded? The death rate from puerperal sepsis is not only practically stationary, but is far too high. Many women are left with a legacy of chronic invalidism, and swell the ranks of those who attend gynaecological clinics, when, by early

and adequate treatment, any serious complication might have been prevented. Many even go into labour with sepsis already established, in spite of ante-natal clinics, and in spite of our present-day knowledge of bacterial infections and antiseptics.

The following are the reasons, in my opinion, for the present unsatisfactory state:

1. Too much stress has been placed on the fact that the phenomena of the so-called normal puerperium are of a physiological character.

2. There is a widespread belief, unwarranted by the facts, that puerperal sepsis is always characterized by fever, the result of bacterial infection of the raw uterine surface.

3. Treatment is in many cases not begun early enough, nor is it continued until every symptom and sign of sepsis has disappeared, and the uterus has been restored to its normal condition.

4. Most important of all, and as a corollary to No. 2, early symptoms and signs have been too long neglected by medical attendants in maternity cases.

With regard to the first reason, it must be borne in mind that after labour the raw uterine surface is an open wound; as in the case of other wounds, simple reactionary or inflammatory changes must occur in the course of healing. These reactionary changes are at a minimum in cases where the uterine surface is left perfectly clean, and where it remains clean. After labour, however, placental remnants and blood clot frequently remain attached to the uterine wall, and only gradually are they extruded. So long as they remain in the uterus they are undoubtedly a potential nidus for infecting organisms of varying degrees of virulence.

The line between what may be regarded as physiological and normal on the one hand, and pathological on the other, is too fine to be drawn; the one may merge insensibly into the other. I contend that for every case of severe puerperal sepsis there are hundreds where a mild degree of sepsis exists unrecognized, but which nevertheless leads to untold suffering among women. This brings me to the second of the reasons given above—namely, that there is too widespread a belief that puerperal sepsis is always a febrile disease. Nothing could be further from the truth, and, until we rid our minds of this idea, little progress will be made towards combating the risks of maternity.

In every published list of statistics a temperature of 100.4° F. is regarded as the sign of puerperal sepsis. There are many instances, some to our sorrow, in which we have wasted valuable time and have exposed our patients to the greatest risk, through too blind an acceptance of the current teaching. Temperature, as an index of early pathological changes in the uterus, is by itself a thoroughly unreliable guide. All the signs of pathological inflammation must be taken into account, and, if we must give pride of place to one, surely it should be to the pulse rate.

A recent case which came under our notice will illustrate what I have just written. This patient had a normal temperature, but her pulse rate ranged from 104 to 120. At the end of four days her temperature rose to 101°, and, as the standard of morbidity had been passed, active treatment was begun. The patient, however, died of septicaemia.

In my experience it is exceptional for cases of puerperal sepsis to develop pyrexia at the outset. Many patients have offensive lochia, red lochia, and purulent discharge, and yet for some days remain entirely apyrexial. Further, while severe cases of puerperal inflammation are due to bacterial invasion of the raw uterine surfaces, there is a much greater number where inflammatory changes occur as a result, purely, of the retention of placental fragments