it should always be associated with an attempt to understand the child's emotional reactions, which are the underlying cause of this form of maladjustment to society.

In a certain number of cases in which the child is obviously not adapting itself happily to the changed conditions of life away from home and is not settling down in its billet it would be of great value to remove it, at least for a time, to a special environment where it would be under the care of people who are accustomed to the handling of children and who could help to readjust it and train it in habits of cleanliness. Certain organizations are concerning themselves with the provision of such accommodation and with investigation of the nature and extent of the problem. These include the Mental Health Emergency Committee, which has been formed of representatives of the Central Association for Mental Welfare, the Child Guidance Council, the National Council for Mental Hygiene, the Association of Mental Health Workers, and the Association of Psychiatric Social Workers, and whose address is 24, Buckingham Palace Road, London, S.W.1 ; and the Invalid Children's Aid Association, 19, Kensington Gate, London, W.

Conclusion

It will be seen that the problem of enuresis is one of great complexity, and not a matter that can be dealt with by any rapid or rough-and-ready methods. This is unfortunate, because it is a very practical and real difficulty at the present time, and is causing great annoyance and damage and extra work to the hostesses of evacuated children. A magic is greatly needed, but, alas! no magic is available. On the contrary, each case must be treated on its merits, and demands both time and patience as well as insight and understanding.

The social worker and the teacher are the two people who can do most to help: the social worker because she is in touch with the child's new home and his hostess and her family, and the teacher because she is in touch with the child and is the only link with his past life. Many cases will respond to a friendly approach and to the opportunity to talk freely to a sympathetic listener. All child-guidance experts will recall cases in which a single interview has been sufficient to change the child's whole outlook to life and to work a seeming miracle, so much does it mean to a child to feel that he is understood. Others will take much time and patience, and yet others should be referred to special clinics for guidance. It is better to refer a child unnecessarily than omit to refer one who needs specialized treatment. It is obvious that in all receiving areas such clinics should be available and also that all social workers and teachers should have guidance by means of pamphlets or talks with discussion, or preferably both, in the handling of the children's and hostesses' difficulties. If this is done the evacuation may prove a blessing to many children and lead to far better opportunities of personality development than they would have had in their own homes ; but if the children are mishandled now it will prove a national danger and will sow the seeds of temperamental instability, of asocial or anti-social behaviour, and thus lead to serious psychological damage to the coming generation.

Summary

The prevalence of nocturnal enuresis is discussed, particularly in connexion with war-time dispersal.

The importance of training in habits of cleanliness in infancy and early childhood is stressed.

A survey is made of the physical and psychological causes of bed-wetting.

The treatment of the condition is outlined.

TREATMENT OF MENTAL DISORDERS WITH MALE SEX HORMONE

BY

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The record given below of patients treated with sex hormones contains, with one partial exception, no case in which there was any physical indication, such as hypogonadism, for hormone treatment. The paper includes the case histories of males treated with testoviron (testosterone propionate) and proviron (androsterone benzoate).

Case I

A man aged 53 had previously been a certified patient in another mental hospital, where he was acutely excitable and noisy. Before coming under my care he had also had prolonged psychotherapeutic treatment without any tangible result. It was clear from his history that his psychopathological reactions began as a young boy over forty years previously. The family history was bad. One parent was at least psychoneurotic, and the mother had been in a mental hospital.

The patient was admitted in a state of acute anxiety, with obsessional traits. Obsessional doubt was a paramount feature of his illness. He was markedly paranoid, and, despite repeated assurances that he was in the hospital for treatment, held that he was here as a punishment and because he had annoyed his relatives. His paranoid tendency was so pronounced as to make him inaccessible to psychological treatment, which was abandoned. His ideas of persecution were such that one night he made his way out of the window of his room, below which there was a drop sufficient to endanger his life. He was rescued from this predicament by an attendant at considerable risk to the latter. It was impossible to be certain whether this was an attempt at suicide or escape.

The patient's condition deteriorated, and a bad prognosis of paranoia was made. He was given testoviron (5 mg. daily) by intramuscular injection on twenty occasions. He showed mental and physical improvement towards the end of his course of injections. The improvement became more noticeable about a fortnight after these were discontinued. His paranoid tendency diminished quickly. His anxiety decreased, he became restful and quiescent, and his symptoms of obessional doubt diminished considerably, so that he no longer spent hours pondering whether every helpful reassurance made to him implied its dreadful opposite. He was able to transact the business necessary to enable him to return to his profession, whereas when previously he was advised to send on an ordinary income tax form to his solicitor he remained for days in a state of indecision, anxiety, and increased psychomotor restlessness, refusing to part with the form, yet dreading its presence in his bedroom.

He gained 3 lb. during treatment, and was discharged six weeks after ending his course of injections. Hesitation in diagnosing a true "pure culture" paranoia is proverbial. I do not assert that the case came within this category. I am satisfied, however, that for some weeks his paranoid tendency was emphatically psychotic. I have never seen a paranoid tendency to such a degree, occurring in clear consciousness in a patient at any rate superficially rational, which cleared up so rapidly.

A very interesting feature in this case was that the first beneficial mental effects from the treatment embodied a rapid transition from a psychotic to a psychoneurotic state. One was able to note, in the course of a few days, delusions becoming obsessions—for example, the patient's positive false beliefs that different horrors were imminent changed rapidly to a preoccupation with the mere

possibility of their occurring at some future date. Then, finally, his acute anxiety and obsessive tendencies were dispelled.

Case II

This patient, a man aged 26, had a history of increasing mental ill-health for six years. During this period his powers of concentration and memory diminished and he developed a profound inferiority feeling, caused by repressive home influences and successive misfortunes in failing to secure and maintain suitable employment, and actually precipitated by conflict over attempts to abandon masturbation. He performed compulsive acts, leaping over obstacles, even chairs outside a furniture-dealer's shop, and vaulting over pillar-boxes irrespective of passers-by. He was referred to me after being apprehended for entering several houses and appropriating various articles.

There was a neuropathic trait in the family history. One brother committed suicide. The patient was retarded, listless, and depressed, with strong expiatory ideas, desiring to be punished as an enemy to society and hallucinated in that he heard voices announcing that he was a worthless individual and unable to work. Under treatment he became busily occupied, but continued to demonstrate his tendencies to compulsive acts, and, at a period when he was no longer hearing the voices referred to, expressed his belief that they would return to torment him if he ceased working hard.

He was given intramuscular injections of testoviron (5 mg.) daily for thirty-three days. Despite hard physical work during this period he gained 5 lb. Mental improvement was definitely noticeable in the course of his injections, but attained its maximum about a fortnight after their cessation. He ceased to be hallucinated, worked hard for his own benefit, and, though desirous of pleasing those in charge of him, was impelled to do so more by courtesy and good nature than at the behest of his obsessional tendencies. He became cheerful and self-confident, and very helpful and kindly to patients older and more infirm than himself. He took a keen interest in his prospects of employment, and at my suggestion attended lectures in anatomy and physiology given to the nurses, because I had advised him that, in virtue of his reawakened interest in and sympathy with others, he had qualities very useful in the making of a good male nurse. He left my care five and a half weeks after ending his course of injections, being called up from the Reserve to do two months' training in virtue of his previous colour service.

This was a case in which the patient improved far beyond my most sanguine expectations, for, in addition to the grave medico-legal complications, his case was serious because, in addition to profound obsessional tendencies, he showed early signs of schizophrenia.

Case III

This patient, a man aged 74, was admitted suffering from acute melancholia, with delusions of financial ruin, and hypochondriacal delusions, chiefly that there was an obstruction to the passage of food from his mouth to his stomach, which latter belief so developed that for weeks on end he had constantly beside him a receptacle from which he could not be separated and into which he spat incessantly, asserting that what he ejected was food unable to pass into his stomach. His physical condition was bad. He had glycosuria, resulting from chronic interstitial pancreatitis, and extreme cardiovascular degeneration, with mitral stenosis and gross impairment of the peripheral circulation. This latter condition was so severe in his feet that it was agreed, in consultation with the specialist called in to investigate his circulation, that their state was pregangrenous, and measures were taken to prevent gangrene supervening.

He was given a course of twelve testoviron injections (5 mg.) every fourth day, and seemed better physically and more cheerful and alert mentally; but the improvement was not enough to impress me, except in one particular: the testoviron seemed definitely to have a beneficial circulatory effect and to abort the tendency to gangrene of the feet.

Three and a half months later I put the patient on a course of proviron (5 mg.) every fourth day for twelve doses. After the completion of treatment there were signs that he was more cheerful, and capable of displaying an interest in matters other than those concerned with visceral function. One hesitated to exaggerate what might have been no more than a transient improvement in to all intents and purposes a hopeless illness, but after a month this improvement was unmistakable. He continued to improve steadily during a period of three and a half months, in which time he gained 7½ lb. He was now able to describe spontaneously his previous ideas apropos financial ruin and oesophageal obstruction as delusions.

He left the hospital, and some weeks later his wife informed me that his depression had gone, that his improvement was amazing, and that he was able to sing duets with his daughter.

I could not trace the improvement in this case to anything other than the proviron. The recording of a case of this description may seem undramatic and unoriginal, but the vast majority of psychiatrists would agree that anything other than the most inconsiderable alleviation of symptoms, except the superficial pseudo-improvement associated with the blurred outlines of a supervening dementia, could not be expected in a case of melancholia with delusions of visceral function and financial ruin in a grossly arteriosclerotic old man of 74.

Case IV

This man, aged 24, showed profound anxiety symptoms, and had intense indefinable dreads and also at times the fear of dying. Sometimes life seemed as though "coming to a stop." In addition he had somatic symptoms of anxiety, chiefly tachycardia, giddiness, and tremors of the limbs. His systolic blood pressure was 42 points in excess of the normal for his age. There was no physical cause for this other than the imbalance of the vegetative nervous system concomitant with his anxiety state. He had intervals during which everything "went queer" and death "seemed imminent." These attacks were ushered in by numbness in the legs. He was intensely preoccupied with the working of his heart and lungs, being terrified lest the former should stop, and saying that his pulse did not beat as it had formerly. He asserted that his breath seemed "at its lowest ebb." He was intensely hypochondriacal, and thought it possible that he might have appendicitis or cancer or tumour of the brain.

Alternating with these anxiety attacks were periods in which he was without interests external to the working of his own organs and in which he could discuss his symptoms with a fatuous smiling indifference. He had an acute social sensitivity, and was always worried as to what people thought about him. He was unable to follow his occupation, and despite his age showed a profound and clinging dependence on his mother.

He was given testoviron (5 mg.) alternating with proviron (5 mg.) by intramuscular injection every five days for eight injections. He began to show considerable improvement about ten days after the first course of injections was completed. His improvement continued steadily for about three weeks, when the maximum benefit was noticed, following which he had a recrudescence of symptoms in a milder form six weeks after finishing the first course of injections. A second course alternating as before was begun. His symptoms abated during this course of six injections, after which he became what his doctor described as a "he man." He worked hard at his job, was intensely social, and was unrecognizable as the profoundly hypochondriacal individual before treatment was initiated. Formerly a source of concern to his mother because of his intense hypochondria and lack of interest in anything beyond the horizon of his visceral functions, her present anxiety is that his gaiety and social activities are somewhat beyond what she cares to countenance.

Discussion

The important fact to be noticed is that in two of these cases the prognosis was considered hopeless, in the third it was grave in virtue of the insidious development in a young man of schizoid signs, and in the fourth the psychoneurotic signs were present to a degree which paralysed productive activities and acted as an insuperable bar to ordinary pleasures. The absence of specifics for mental disorder is an accepted and lamented fact. In the cases above mentioned conditions of undoubted gravity have been remedied. The method has the advantage of a physiological justification lacking in more dramatic methods of treatment. Therapy with sex hormones is a rational procedure in post-climacteric conditions such as Case I and in schizoid states such as Cases II and III. Its mode of operation where the picture is tinted largely with psychoneurosis, as in Cases II and IV, is less readily understandable. I believe that the form of psychoneurotic symptoms is largely determined by the degree of stability shown by the vegetative nervous system, and this, in its turn, is dependent on glandular activity. On these grounds one obtains at least a hint of how these therapeutic agents act in the amelioration of psychoneurotic symptoms. It does seem possible, however, that sex hormones of the potency used in the treatment of these cases have a general dynamic action in producing a more healthy affective tone in psychological disorders of divergent types.

In all these cases except Case II I am satisfied that to the sex gland extracts alone could the remarkable improvement be ascribed. In Case II psychotherapy was definitely of value, but the remarkable speed and extent of the improvement were due to the hormone therapy.

Glandular therapy, largely on the shot-gun basis, with a preliminary barrage of faith, has been known to the profession for a decade as a line of treatment in mental disease. I myself have experimented before with glandular extracts of the most diverse nature, alike only in the extravagance of the claims made for them and in their uniform uselessness. I am quite convinced that the pure hormone products used in these cases are of a potency and usefulness such as I have not encountered before in the treatment of psychiatrical conditions by the older gland extracts. It may well be that in this direction lies a future hope in the treatment of psychotic conditions.

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As is common knowledge, the strain of war conditions is playing much havoc among people suffering from nervous and mental illness. To assist them the Mental After Care Association is having to expend money far in excess of its previous experience, because a special function of this organization is to give practical help to the incipient mental patient. War weariness and unemployment tend to affect a large number of men and women who, but for the extra tax put upon their nervous systems, would not break down, and those are increasing in number as time goes on. Last year the association dealt with over 4,000 patients, and in order that the work may be carried on to its full standard of efficiency in providing convalescence, work, tools, clothing, etc., to those in need, funds are urgently required, and the secretary, Miss E. D. Vickers, Room 354, Grand Buildings, Trafalgar Square, London, W.C.2, will gratefully receive any donations or give fuller particulars.

THE SURGICAL TREATMENT OF TRIGEMINAL NEURALGIA*

BY

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Trigeminal neuralgia is one of the aristocrats of medicine; it has a noble inheritance extending far into the past; it knew Avicenna and was nurtured in the faces of monks and distinguished ladies, and now, in its maturity, it has chosen its trigeminal home in healthy stock irrespective of social or professional distinction. Tic douloureux connotes a clinical syndrome of severe spasmodic pains in the face and does not imply a precise pathology, although there are not wanting abundant suggestions as regards its actual parentage.

My remarks are not concerned with those pains which can be attributed to a demonstrable pathological lesion and which can often be cured by the removal of a septic tooth, drainage of a paranasal air sinus, or the enucleation of an acoustic neuroma. It is rare for neurosurgeons to be confronted with such easy problems: the cases have usually been previously sorted out; certainly many of these patients are edentulous.

Various Operative Procedures

Many drugs have been used which control the severity of the pain, but they are never curative. Even the opportunity to live under ideal conditions is of little avail, change to a more favourable climate being just as likely to make the pain worse as better. Surgery offers a cure, and it is a blessing that something can relieve these terrible pains. All kinds of operations have been used (see Figs. 1, 2, and 3): avulsion of or alcohol injection into the supra-orbital, infra-orbital, and inferior dental nerves; alcohol injections into the ganglion and into the trunks of the second and third divisions; intracranial neurectomy in trunks 2, 3, and 1 in this order of frequency; posterior root section in the middle and posterior fossae; and division of the trigeminal tract in the medulla oblongata. All these manœuvres have been used by me at one time or another. The surgical attack naturally has developed from without inwards, from something easy to something technically difficult in an attempt to procure precision of section and permanency of result and to avoid troublesome complications and unpleasant sequelae. Section or alcohol block of the nerve trunks in front of the ganglion usually gives temporary results lasting at most two years. Complete destruction of the ganglion by alcohol is permanent and the injection is a relatively simple manœuvre; its fractional or partial destruction by alcohol is extremely difficult, and to acquire the skill many years of practice are necessary. Root section, whether in the middle or the posterior fossa, has two great advantages: fractional or partial division of the nerve can be made with precision and the motor root can be conserved. Complete anaesthesia of the cornea exposes this membrane to the dangers of trophic ulceration, with resulting opacity, irrespective of the method of denervation employed. Fortunately, this serious complication never occurs when the nerve supply to the cornea is not severed, and this is why fractional root section with sparing of the ophthalmic fibres is so important an addition to the modern operative technique. Facial paralysis occurs in a variable

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