

## THE PSYCHOSES OF ADOLESCENCE\*

By

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THE adolescent psychoses are amongst the most rewarding subjects for study in all psychiatry, not only on account of the considerable clinical interest of these patients, but because no other group affords the psychiatrist quite such an advantage by reason of age alone, an age that covers the peak phase in maturation. The juvenile is young enough for childhood environment to be vividly recalled, the responses to the stresses of puberty are already evident, and in a short space of time the writing of the future adult life pattern will be on the wall. Furthermore, owing to the more likely presence of parents or guardians, sometimes lost or dead by the time one deals with adult disorders, a more comprehensive view of the hereditary influences, and a relatively adequate account of the early formative years, is generally possible.

Until the late nineteen-twenties, few writers paid much attention to the psychiatric disorders of the young, and such as did so kept to the view that they should be assimilated into existing adult classifications. Individual psychodynamics was not popular, and earlier still, in the latter part of the last century, the term "Psychosis of puberty and adolescence" was held to cover all psychotic developments for this age period as a single entity.

In the last three decades there has been a strong shift towards the study of onset and development of psychiatric illness, leading to the investigation and treatment of the behaviour problems of the child and adolescent. The function of the whole personality became the dominating issue, rather than the former over-riding pre-occupation with a cellular pathology. If it was obvious that psychiatric illness in the young used to be something of an appendage to adult psychoses, it is now clear that this situation, if not reversed, is at least levelled out, and that our ideas on the adult psychoses may need some revision to achieve continuity with the outcome of adolescent development. There is no question of adolescent psychoses being in any special classification of their own. Their long-section study illustrates vividly that such conditions are but part of a process begun in childhood and continuing to later life, yet the normal processes of maturation endow the psychoses and other breakdowns in adolescence with some characteristic features, just as happens in other epochs of life.

Three features are particularly characteristic of adolescent psychoses. First, their capacity for variation in duration, intensity and form. They are indeed the unstable pathological deviation from an unstable physiology. In the course of a few days the neurotic reaction may swing to the psychotic, and *vice versa*. Alternatively, phases of anxiety or behaviour disorder, affective disturbance or schizophrenia may succeed one another for little obvious reason. Familiarity with adolescent breakdown has certainly dispersed any lingering possibility of neuroses and psychoses being separate entities, and has demonstrated them to be merely successive stages of the process of morbid adaptation. Another main feature is the readiness with which regression to earlier forms of

\* Based on an R.M.P.A. Maudsley Bequest Lecture, 8 November, 1955.

behaviour is achieved, a finding quite consistent with normal 'teen age psychology in which mild and brief regressions are seen in the face of stress. Even pathological degrees of regression at this age fail to carry the ominous prognosis often associated with the same change in the adult. Finally, these psychoses can develop from a setting of conduct disorder in a manner unusual in adults. In retrospect it may be found that stealing, truanting, refusal to attend school, screaming attacks, and behaviour sometimes involving court appearances, have marked the onset of a disorder that subsequently is diagnosed as schizophrenic.

Adolescent psychoses frequently show certain physical characteristics, in relation to which Clouston's observations on puberty and adolescence in 1898 still seem very relevant when he wrote that after straining the brain's potential to the utmost it was fallacious to suppose that there is plenty of energy left for growth, nutrition and reproduction. It is scarcely surprising that, considering the stressful background of most adolescent psychotics, these patients are usually stunted in growth and physical stature, and immature in development of primary and secondary sex characteristics. Testes are sometimes small or undescended, pubic hair abnormal or retarded in growth.

Turning to actual types of adolescent psychotic disorders—from what has been said it follows that the phenomena which can be displayed by adolescent psychoses will be bounded by the individual's degree of personality development and integration. If the patient is immature, so is the psychosis. Because of immaturity certain psychotic patterns seen in adults are either absent or very rare: e.g. classical paranoia and paranoid psychoses, especially those with fully systematized delusional formation, and paraphrenia. Schizophrenic illness is easily the most commonly occurring psychosis, followed by psychotic depression, manic reactions and manic depressive states, organic confusional psychoses, including epilepsies. Such diagnostic labels appear to be useful and valid in adolescence, provided it is understood that the symptom picture and course of illness may differ from the corresponding adult breakdowns.

In order to give a fair picture of the characteristics of adolescent psychosis I have drawn on over a hundred and eighty cases, composed of a hundred and forty-six psychotic and thirty-four borderline psychotic patients, admitted to the juvenile departments of St. Ebba's Hospital in the past six years, and whom I have personally examined.

*Schizophrenias.* The common denominator in over a hundred such patients was a difficulty in relating themselves to people and situations from early life. This social failure in adaptation was associated with an anxiety which seemed to be intolerable, and they might even be said to be constitutionally allergic to anxiety, and to avoid it by any sacrifice. The diagnosis of schizophrenia should only be made after a definite period of time, perhaps several weeks, and is not negated by transitory appearance of symptoms more often associated with other forms of illness. Frequently one will find a more lively emotional response than is usual in the adult, and less incongruity of affect. In practice the schizophrenias are of two main types: (a) The acute schizophrenic episode, and (b) The full attack, with chronicity in some cases. The classical sub-groups of adult life are little in evidence; most cases are of mixed symptomatology, while catatonia and paranoid states are less commonly encountered. The symptomatic emphasis is on social withdrawal, disorders of activity, of interest, speech, and peculiarities of manner. Thought disorder is mainly demonstrated by a vivid phantasy development on a relatively simple plane. The acute *schizophrenic episode* will show some portion of the following com-

posite picture extracted from forty-two cases. From a timid, retiring, socially or emotionally inadequate, or sometimes intellectually dull personality is seen the rapid development of behaviour disorder, with muteness, panicky attitude, a plethora of strange ideas, such as seeing a neighbour looking shrivelled and digging a grave. The body does not belong to them, hands have changed their shape. They may be aurally hallucinated, hearing God's voice; or paranoid, being threatened by Communists. There may be a flight into religion, or into high-sounding ideologies with pseudo-scientific jargon, though actual phrasing is not usually disconnected. Brief catatonic stuporose periods may occur, with refusal of food, impulsive homicidal attacks on relatives, or suicidal attempts. They may urinate or masturbate shamelessly.

For illustration, there was a boy of thirteen years, studious and quiet in disposition, but a misfit in a family of relatively tough youngsters and the butt of his father. He had won a scholarship at school. His condition deteriorated over the six months preceding admission, beginning with anxiety about school work, complaint of pain connected with an undescended testicle, and occasional enuresis. The acute phase began about a fortnight before admission, when table manners deteriorated, he became sullen and aggressive at home, finally singing and shouting through the night, killing two pigeons and breaking into the gas meter. He chased up and down the street with a hatchet, and used much obscene language directed against his father. Investigation of the home showed that he was on bad terms with his father, who teased him about book learning, and the parents themselves quarrelled constantly. The home was overcrowded, the financial position very poor, the marriage having been forced on account of the patient. The mother is said to be highly strung and the father's temper violent. When seen after admission patient was in a state of acute excitement and restlessness, occupied with ideas of impending castration, said he could smell ether and spoke of being stung by various non-existent wasps. His thought content was a mixture of illusion and hallucination. He stated that he was in Wales and various other places, and his attitude was at one time anxious and fearful, at others paranoid and resentful. E.C.T. gave temporary relief, but he relapsed, describing the threatening voice of a man, fear of being poisoned, and knifing. He continued to be disorientated and amnesic. During thirty-one insulin comas he improved considerably, having failed to respond to E.C.T. and continuous narcosis. During subsequent discussions his hostility to his father, his rejection by his mother, and his anxiety at school were evident. The final break came after the death of a friend with whom he had endeavoured to make a substitute home, and after the development of guilt feelings over sex difficulties. Under the circumstances he was resettled in an orphanage, and though his progress was uncertain at first he adapted quite well until two years later he was once more admitted to a mental hospital in a tense, anxious and depressed aggressive state, but this time not obviously schizophrenic. After five months he was discharged to a training centre, only to be re-admitted to a mental hospital five months later, this time with typical schizophrenic symptoms, including bizarre delusions. He is reported to be showing slow improvement again, but is not considered to have responded to insulin comas.

The more chronic and fully developed adolescent schizophrenics show many of the above features in a less acute tempo. Initially there may be a fairly prolonged phase of behaviour disorder, with severe outbursts of temper, stealing and perhaps disposal to an Approved School, though undoubted efforts are made in out-patient departments to single out for hospital care the case of behaviour disorder who may be passing into a psychosis. Alternatively

one has seen a short phase of mania precede hebephrenic illness, and a prolonged obsessional neurotic state is a morbidity defensive manœuvre which may delay schizophrenia for months or years, and at times the obsessional and the delusional idea may be hard to differentiate. Occasionally in adolescence one finds the chronic outcome of Kanner's early infantile autism, also the so-called dementia praecocissima of childhood. Such patients have usually been unsettled and restless from infancy. They show an excessive and persistent dissociation into phantasy life, and are solitary and timid.

The position as regards heredity is that in the acute schizophrenias just over 25 per cent. were known to possess definite hereditary tainting in near relatives, while in the chronic and full-scale attacks the loading was 50 per cent. (compared with 53·8 per cent. of Kraepelin's one thousand and fifty-four adult cases). There was no significant difference between the tainting in the sexes separately.

Examination of personality prior to breakdown showed that abnormal and particularly schizoid traits were found much less often in the acute than in the chronic cases of either sex, being 40 per cent. in the acute and 68 per cent. in the chronic patients. It was noticed that schizoid personality disorders were much more often evident at an early age in the chronic than in acute schizophrenics.

One cannot leave the subject of schizophrenia without comment on the particular position of the mothers of these patients. They specialize in an unstable devotion to their sons, usually over-protectively dominating or indulging their over-dependent offspring. Occasionally they are the target of much aggression, yet such mothers are undeterred, and our department has often been visited by these battered women. On the female side the daughters also tend to be over-protected by domination, or to be ignored, with a resulting ill-balanced attachment to either parent. It is rare that relationships are described as satisfactory.

*Borderline Schizoid States.* These are an interesting group since, more than most, they are apt to keep one guessing as to the probable diagnosis and outcome. All manner of diagnostic labels are liable to appear in this group, which seems to be only given cohesion by the ever-present possibility of schizophrenic psychosis. To take a sample series of such patients, they are described as anxiety state with schizoid trends, as intellectually dull and schizoid, obsessive and schizoid, schizoid psychopathy, inadequate psychopathic schizoid personality, and schizoid states associated with epilepsy or depression. Many seem to remain in an arrested borderline state of schizophrenia for years, never becoming fully psychotic or only briefly so, and never fully recovered. One might mention particularly the inadequate case with behaviour disorder, who has as it were an attitude of schizophrenia, who may even regress to degraded habits but rarely becomes floridly schizophrenic, though liable to be referred to hospital as such. Amongst this heterogeneous group one sometimes finds a future young recidivist in minor criminality, as the following case shows: A youth of nineteen was admitted in November, 1949, as a case of dementia praecox. His parents had always regarded him as a problem. At school he developed wanderlust, and began to dress in girls' clothes. In 1943 and in 1944 he had periods in two mental hospitals, and is quoted as simple, being unable to give the number of days in a month or year, talking enthusiastically of his vagrant habits, being crafty and appearing to be hiding something. He absconded twice, and returned home regarded as unchanged. At home he ran through innumerable jobs, interspersed with housebreaking, until

in November, 1949, he was charged and sent to Wormwood Scrubs. In prison he was noted to have auditory hallucinations, ideas of reference, feelings of unreality and suicidal thoughts. Passive homosexual experience was admitted. Investigation in the Juvenile Department of this hospital revealed an unhappy home life on account of parental quarrels, the infidelity of his father, and a mother who herself had mental illness. Patient was apathetic and vague, indefinite about auditory hallucinations, mildly depressed, and generally making an unstable impression. He made some improvement after three E.C.T.s, but continued to show inadequacy and panicky feelings. In crowded places he had a compelling desire to ask people if he had seen them before. He managed to hold a job outside of hospital while still living in for a time, but eventually absconded. In 1950 and 1951 there were further hospital admissions, and also periods in Wormwood Scrubs. During the former a full course of insulin coma therapy was given, but doubts were expressed as to the veracity of his hallucinations and tales of impulsive desires. He eventually returned to his parents, but after several hotel jobs he was again charged with housebreaking and larceny. Further hospital care followed, with subsequent discharge and resettlement in work.

In an allied category was the youth of sixteen years, son of rigid, dominating, over-anxious parents, he suffered an acute sense of social inferiority, had homosexual trends and a tendency to much self-adornment. He compensated with strong views on art and religion, stating that he would become a great Islamic religious leader, and that he could read people's minds. Though in fact immature mentally, he posed as pseudo-sophisticated and was very condescending. As in many such types, symptoms are apt to be worse at home and are mainly of a defensive character, usually to the parental attitude.

*Follow-up.* Eighty-five per cent. of adolescent schizophrenias can be discharged home. It was possible to follow up 70 per cent. of the schizophrenic discharges for periods varying from two to four years. Although the recovered improved rate of the acute schizophrenic group was high, so was the relapse rate, since of twenty-six such patients thirteen relapsed during the follow-up period. However, of this thirteen, only four still require hospital care, so that the long-term outlook would seem more cheerful than the 50 per cent. relapse rate would suggest.

In the more chronic group with full-scale schizophrenic illness, out of forty-five patients followed up twenty-one relapsed, six of them more than once, and nineteen remain in hospital care, while two more needed much supervision at home. Some twenty-two cases have made a fair to good adjustment at home. If all cases are combined, the result has been that thirty-one out of seventy-one (i.e. 44 per cent.) schizophrenics have made a satisfactory recovery or improvement out of hospital care over a two to four year period of follow up.

Follow-up of the borderline cases indicates that in a fair proportion the risk of schizophrenic development was real enough. Out of twenty-three cases traced, seven are in mental hospitals, two in approved schools, many others needing substantial degrees of care in homes or hostels, and only a few appear to be attaining any kind of stable adjustment. In fact their prognosis is apparently rather worse than for the more orthodox forms of schizophrenia.

*Affective States.* On the whole it is more difficult to be sure of diagnosing psychotic depression in adolescence than in adult life, and the incidence is decidedly less than that of schizophrenia at this age period; the latter being more numerous in hospital practice by three to one. The previous personality

of the depressive is usually better integrated than that of the schizophrenic. Compared with adult depressions they are more readily influenced by their environment, e.g. their attitude in the consulting room shows more variation from that in the ward. Their very depression, like the whole adolescent make-up, is less fixed. This description might seem halfway to an hysterical depression, but while it could be academically interesting to carry the issue further, the resulting attitude might be clinically dangerous. Many of these depressed adolescents have broken down under severe stress at home, and are pre-disposed by heavily tainted heredity. Symptomatically the picture can be florid, and definite suicidal attempts, by aspirin, cut wrists, gas and strangulation, were made in one-third of all cases. Depression is often preceded or accompanied by conduct disorder, such as truanting or aggression, with attendance in Court, anxious obsessive rumination and guilt. If a psychotic degree of depression has once been established it is advisable to continue to treat the patient as such, even if neurotic phases seem to occur, until full remission is quite evident. In the male, depression is often coloured by anxiety, and in the female by hysteria. The depression is often reactive to anxiety over parents, siblings, school, guilt over boy or girl friends, and over masturbation. In one case the patient, a girl of fifteen, lost her father, showed conversion hysteria, became depressed and highly antagonistic to her hard, rigid mother, made several suicidal attempts and became wildly aggressive, mostly against herself by tearing her hair, banging her head, etc., needing hospital care. Another girl became depressed through conflict over her stepmother and natural father, fearing to lose the natural parent if she fled from the stepmother. In another instance parental quarrels, sibling jealousy, parental psychosis and changes of home proved too stressful for a boy of fourteen. Immaturity may provoke depression as a response to reluctance to leave school and to face adult life, occupations and sex problems. These are samples of the kind of settings in which psychotic adolescent depression can appear. Eighteen of these patients have been followed up over two to four years. Three have suffered temporary relapses of depression, and two have developed psychopathic personalities. The rest are well and prognosis of depressions at this age would appear remarkably good.

Manic depressive illness is very rare in adolescence, though there is one patient under my care who is reputed to have had authentic mood swings since the age of twelve. If real cyclothymia is unusual, manic attacks are a little more common. In six years there have been four patients, two male and two female, who showed nothing more than a classical manic attack with a euphoria, over-activity, flight of ideas, mischievous behaviour and an aggressive reaction to adversity that could hardly have been bettered by any adult. They mostly regressed to an earlier level of behaviour, and a fourteen-year-old boy behaved like one of nine. These attacks sometimes result from a period of over-stimulation, contact with adult ideas and activities proving too much. They avidly take on too many interests at one time, only to collapse with acute mental indigestion, as it were. In a few, a manic reaction ushered in a schizophrenic illness, and it is necessary to differentiate mania from mere over-activity without euphoria, sometimes associated with epilepsy, organic states and anxiety neurosis. Some mental defectives, perhaps pressed beyond their capabilities by parents, lapse into manic episodes, recovering rapidly when the precipitating trauma is relaxed. Seven patients who have had manic types of attacks have shown no relapse; one is at Cambridge and another has passed the general certificate of education.

The other disturbances which may reach psychotic proportions in adolescence are those associated with epilepsy and the organic states. Such patients have proved extremely difficult problems, since not only have organic traumas caused arrest of intellectual development, but also of emotional and social maturation, resulting in very damaging personality changes and delinquency. One sixteen-year-old schoolboy of previously clear history required four years of intensive care and training, with three mental hospital admissions, to readjust after a blow on the head in the swimming pool had precipitated violent psychomotor attacks on other boys, the school matron, stealing and spells of depression. In another instance an attack of tonsillitis precipitated a hyperkinetic confusional state with fits in a constitutional epileptic. His behaviour and attitude temporarily regressed by some six years, and during recovery he developed an hysterical overlay, with excessive dependence and attention-seeking conduct. Eighteen months later he is well, fits are under control, but moods liable to instability with undue elation and depression.

*Treatment.* One cannot pretend to speak comprehensively on therapeutics in a paper of this nature, so my comment must be restricted. Since therapy must be correlated to the individual, one uses methods from both child and adult psychiatry. The particular line taken will usually depend on an estimate of how far the patient has matured intellectually, emotionally, socially and physically. Unless the breakdown is mild and brief, or private nursing possible, some form of residential care is required. There is no formal provision for adolescent or juvenile psychoses in this country, and such patients have generally had to make do in institutions primarily intended for other types of disorder. Mental and mental deficiency hospitals, approved schools, observation wards and homes of one kind or another have taken the occasional case with reluctance. A very few hospitals have made special provision for their care, and these have gone some part of the way to ensure that residential treatment shall be therapeutic rather than carry risk of an additional trauma.

Adolescent breakdown almost invariably springs from a background of considerable stress. The very detachment of the patient from the immediate vicinity of stress to an environment of kindly support is in itself a first step in treatment, and at times sufficient to allow recovery to take place. This is in line with the observations of Eugen Bleuler on schizophrenia, the therapy of which he described as most rewarding to the physician who does not ascribe the results of the natural healing process to his own intervention. One must admit that not only is resistance to psychotic mental illness strong in adolescence, but that the drive to regain equilibrium is also considerable. So long as there is no need to relieve urgent symptoms, it is not a waste of time to delay initiating any particular line of treatment, but rather to allow enough opportunity for personal interviews to understand the patient, and to discover how he or she develops once the impact of coming into an adolescent ward has levelled out. Investigations such as psychological testing and EEG examination can conveniently be pursued in this phase. If no signs of spontaneous remission appear, one has to try to decide what factors or stresses are inhibiting it. In a psychotic illness in adolescence these sources of stress are usually multiple, often implying that no single therapeutic approach is likely to succeed, and in planning treatment it is often necessary to range over various psychological, physical and social methods.

The principles of psychotherapy are substantially those valid for adults, except that one has to rely to some extent on information gained from play activities or occupational situations almost as much as is usual in child psychi-

atry, these activities being, of course, suitably adapted for the more advanced age involved. If no more is said on this point it is not intended to belittle its obvious importance, but I would emphasize that since a number of persons, the doctor, nursing staff, school teachers, social workers, psychologist, occupational therapists, may all play a role in exerting some form of psychotherapeutic influence, at times quite unconsciously, it is necessary that frequent meetings of this team be held to maintain a common policy, to avoid contrary advice, or to prevent the patient using one member of the staff to gain advantage for himself over another.

The place of physical methods of treatment in adolescence is of some interest. Insulin comas, E.C.T., prolonged sleep, various forms of sedation and even rostral leucotomies occasionally have their uses, but less often than in adults. In fact it may be that studying the responses to physical methods in juveniles will eventually assist us to be more selective in adult therapy, and waste less of the patients' and doctors' time in unproductive or even damaging work. In the adult the diagnosis of early schizophrenia with a history of two years or less has become routinely linked with the administration of insulin coma. Some 40 per cent. of the hundred and four adolescent schizophrenics examined personally were acute. Half recovered or improved spontaneously, and the rest were given insulin when spontaneous gain was not evident, or when symptoms had to be brought under control. Only two failed to improve, thus raising the suspicion that more waiting might have produced more spontaneous remissions. However, there are obvious reasons why the wait may have to be limited by treatment, and on the whole the risks of waiting too long are greater than of too little patience. This view finds further support when sifting the more chronic cases, two-thirds of whom were given insulin comas, but with results far inferior not only to the acute types, but to those generally obtained in adults of comparable duration of illness. The influence of age should be noted. There is a tendency for results to improve as age increases from eleven to twenty. Very little success was achieved from eleven to thirteen years. There was a distinct swing towards better results at fifteen years in the more acute, and between sixteen and seventeen years of age in the more chronic cases. Other authors have noted the poverty of results in the very young. It is possible that the response to insulin therapy may be partly linked to the stage of endocrine development, a point at present under biochemical investigation.

E.C.T. is less frequently needed in the adolescent. Its main use is to gain symptomatic control in the acute schizophrenic, to support insulin comas if progress is slow, or if evidence of affective disorder becomes prominent. Depressive psychosis in adolescents often does not need E.C.T., only four out of thirty-two requiring it, though the few treated responded well. It has been less used because entry into hospital alone can stimulate remission in the young, and because recent drugs, on which some comment will be made, have played a part.

Leucotomy also has a very limited role in adolescent psychoses, and the results are not comparable to those of the adult. The chief reason for this discrepancy is that it is scarcely ever necessary to consider leucotomy in the affective disorders of adolescence. Even if comparison is limited to adult schizophrenias, the adolescents still show up unfavourably. Nearly all the eighteen cases known to me were very chronic schizophrenias. Approximately a third of these made some lasting improvement (five out of sixteen), but not more than two patients of the eighteen undergoing leucotomy between twelve and nineteen years of age have been discharged by virtue of the operation



itself. Most of the improvement has been in the more aggressively disordered patients, and in a few the operation has enabled further improvement to be made with E.C.T. or chlorpromazine, which could not be had before. None were made worse.

If the more drastic physical treatments have proved less effective than in adults, there has been compensation in other directions. Much help can be obtained from varying degrees of sedation and narcosis, modified insulin, chlorpromazine, methylamphetamine (methedrine), oestrogens and adrenal steroids. If the reasons for breakdown are often multiple, so are the possibilities of treatment, provided the method selected can relieve the trauma to the patient in some definite way. Some patients seem to be able to adapt to numerous difficulties, but eventually the last straw which precipitates illness arrives. Equally it is fortunate that it is not necessary to relieve the patient of all adversity before improvement supervenes. To restore the situation in but one direction may be enough to bring about a remission, even if more treatment is required to maintain it. To settle the acute stages of illness, a few days' narcosis was often useful, but has been largely superseded by intramuscular chlorpromazine for three days, thereafter changing to oral route in doses up to one hundred milligrams thrice daily. The young, when arrived in the strange atmosphere of hospital, are if anything less ready than adults to part with information essential to the understanding of the psychodynamics of their case; they will defend the parent with whom they have been at loggerheads, when discussing issues with a comparatively strange doctor. Methedrine or chlorpromazine can both assist psychotherapeutic enquiry.

Lately there has been promise of further treatment from the endocrine angle, a somewhat obvious field when one considers the important role normally played by the endocrines in the development of juveniles and adolescents. Much attention has already been given to the relief of symptoms and to the psychotherapeutic re-adaptation of the patient to environmental stress. At times the environment itself has been modified by changes of home, occupation and so on. However, it is also true that our case material is constitutionally unstable, and for constitutional reasons may continue prone to breakdown unless normal adult homeostasis can be achieved. Constitutional factors may well provide the answer to the question why one out of several youngsters in a home has become psychotic, when all have been subject to the same atmosphere of, say, perpetual parental quarrels and alcoholism. If it were not already evident in clinical practice, one would know from the careful studies of Bowlby (1947), Widdowson (1951) and others how chronic emotional stresses causing tension and anxiety in the child can delay maturation of intelligence, emotional stability, social and psycho-sexual development, and normal growth of the body generally. The accepted physiological variations in endocrine development in adolescence are considerable, but are tolerated in a subject whose personality is reasonably stable and well-integrated, just as such people adapt to other stresses of ordinary calibre. In those whose adaptation is already abnormal it is possible for the onset of puberty to alter the clinical picture drastically. For example, there is the youth who until fourteen years of age could never stand up for himself and was socially inadequate. In a short period he became violently aggressive, first towards himself and then against others. In another instance a schizophrenic child became temporarily aggressively psychopathic at puberty, only to lapse again into schizophrenia in adulthood, when the initial impact of puberty had passed.

When endocrine function is abnormal in the psychotic adolescent, it may

show a temporary disturbance coincident with the acute temporary psychotic illness, and will usually regain balance with the recovery of the psychosis. In relation to this, repeated measurement of thyroid and adrenal cortical function has prognostic value. If there is no disorder of endocrine function, then it is likely that the case is either very chronic or of very recent and mild character. Many adolescent psychoses not only show biochemically measurable deviations of endocrine function, but clinical abnormality in the form of undue hirsutism or the lack of it; gonads that are too large or small, or undescended; pubic hair abnormally developed in quantity and distribution. In an adolescent whose psychosis is still recent but not spontaneously remitting, and in whom there are deviations in thyroid, adrenal, gonadal or pituitary function, it is possible in some cases at least to precipitate improvement by correction of the endocrine balance by stimulation or suppression of the endocrines most involved. In the adolescent such temporary treatment may be enough to restore normal function, though in some, as with the adult, substitution therapy may be needed for years. In the chronic adolescent psychotic one frequently finds that even if endocrine function is restored, no decisive effect is obtained, even if, for example, testes and pubic hair develop normally after treatment, and biochemistry is also normal. Further studies are proceeding on a project which promises to become useful in some but certainly not every patient.

To have an adolescent ward is in itself some advance, and ideally its character should be such that mere admission to it is of therapeutic value to the patient, and the means of fostering any tendency to spontaneous remission. The worst obstacle to maintaining its therapeutic value to the psychotic and neurotic case is the inevitable presence from time to time of too many psychopathic or delinquent types, who by their aggressive antisocial conduct increase the anxiety and tension of the rest. Except for the diagnosis of doubtful cases, these last types do not need mental hospital care, and there is much need for their incorporation into a separate wing of the special institutions now being considered for adult psychopaths. The therapeutic value of the ward itself is greatly reduced if not linked to a programme of educational and social activities. Routine schooling and formal occupation is best provided in accommodation near, but separate from, the ward itself, so that such activities provide a complete change of atmosphere from the ward. Informal activities such as games, modelling, sewing, etc. are done in the ward itself in the evenings. It is essential that the programme should not leave too much time for the group of adolescents to be at a loose end with itself, though a few such periods can be very informative, if not too stressful to the staff.

Finally, it can be said that the adolescent psychoses form a group of great interest to psychiatrists normally occupied in the care of either adult or child. These psychoses do not seem to be numerically formidable, but one cannot tell their incidence, since some are kept at home till they improve or enter adult hospital wards, others go to a great variety of disposals.

The special features of adolescent psychiatric states may well make for reconsideration of the significance that should be attached to symptoms as such. A glance at some case records might suggest that the mere stockpiling of symptoms, without much reference to the underlying process, was a desirable pursuit in itself. To the psychiatrist they serve to indicate more than the needs and possibilities of the moment. It is surely the fluctuation in symptoms, with consequent change in the clinical picture, which not only indicates that breakdown is present, but how far it has gone. As psychopathic behaviour merges into neurosis, and neurosis into psychosis, one cannot defend the idea of any

essential separation of these states. They show themselves as stages in a process which, if not arrested, will eventually lead to complete disorganization of the personality, or to stupor, the ultimate in the progress of retreat. In the adolescent these various stages may be passed in a few weeks and then reversed, and much more rarely symptoms can be as chronically fixed at any stage as happens in an adult. Little is known of the reasons why in a group of clinically similar cases some will spontaneously remit and others, in spite of therapeutic efforts, become chronic. Further study of the behaviour of the biochemical reactions of the adrenals, thyroid and gonads to stress shows some promise of being prognostically useful, and may yet throw some light on why male juvenile schizophrenic development is often preceded by an anxiety state, and the same psychosis by a hysterical reaction in the female. The term adolescent psychosis in itself is just as vaguely descriptive as any other of our psychiatric labels. If it means anything it is that in this epoch there is a new opportunity to study the development of mental illness, to observe which factors do or do not influence its course, and to modify the clinical state before morbid responses become irretrievably fixed.

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