A SPECIAL MENTAL HOSPITAL UNIT FOR THE TREATMENT OF PSYCHOSIS AND NEUROSIS IN JUVENILES.

By DALTON E. SANDS, F.R.C.P.Ed., D.P.M.,
Physician Superintendent, St. Ebba's Hospital, Epsom.

SINCE the treatment of juveniles as in-patients in a special unit is somewhat unusual in mental hospital practice, a brief introduction may not be out of place. These units might be considered as another development in a trend which has been progressing for the past 25 years. Until 1930 certification of all admissions to mental hospitals and a mainly custodial régime ensured the majority of patients being largely the end-results of psychiatric illness. Since 1930 the steadily increasing use of the voluntary system has brought many patients to hospital at a stage when their illness can be favourably influenced by modern therapeutic methods. An associated development was the increased provision of wards or units separate from the chronically disturbed cases, or even, as at this hospital, a complete villa system of detached and semi-detached wards for mainly voluntary adult patients.

In case-histories it is often clear that the real beginnings of illness lay in late childhood or adolescence. Unfortunately patients of this age are not suitably nursed with adults, and until recently there has been no appropriate in-patient accommodation for their investigation and treatment. Equally their disposal was difficult and often unsuitable. Some 4 to 15 per cent. of cases, as estimated by Penrose (1949) and Bergman *et al.* (1951) respectively, went to mental deficiency hospitals, while others were sent to approved schools and various homes. Many were kept in their own homes until breakdown became so acute and obvious that they had to be admitted to the mental hospital as the occasional " teen-ager " amongst a host of adults. Others were simply retained at home until old enough to go to such hospitals. For England and Wales such admissions of juveniles total some three thousand a year.

For these reasons separate units for male and female psychotic and neurotic juveniles were started early in 1949 at this hospital, where these types could associate with their own age-group, having their own therapeutic and social programme, uninfluenced by close contact with adult patients.

In the juvenile period there is psychiatric breakdown to a degree which from medical and social standpoints is as much a problem as such illness in later life. There are some who have stated that all children's and juvenile psychoses should be treated at home. Experience with these patients has shown that, however desirable this may be in theory, it is no more practical or safe for some types of juveniles than for adults. The truth of this view might have been inferred in any case from the frequency with which such cases have found their way for years into all kinds of makeshift in-patient accommodation, because home for one reason and another proved impossible or practically non-existent.

The St. Ebba's Hospital juvenile unit has 25 male and 25 female beds, and since the general setting of the unit, staffing and material facilities agree in principle with those described by Warren (1952) no further detail will be given.

Classification.

By working on this " link " period of adolescence it should be possible to understand better the disorders cloaked by such unsatisfactory terms as " maladjusted " and " prepsychotic," and to discover what they may represent in psychiatric disorders of later life. For example, some children who up to twelve years have been problems by reason of excessive timidity and shyness, change with onset of puberty to aggressive conduct, and then as they near adulthood show schizoid or schizophrenic illness. Incompleteness of development and maturation of the juvenile nervous system obviously limits the patterns of responses which these patients can show. As will be seen shortly, some adult illness appears to be almost unrepresented in childhood or early adolescence. Whatever the situation in those

under twelve years, experience of the over twelves shows that " maladjusted " cases referred to this unit after investigation usually qualify for schizophrenic, neurotic and psychopathic groups, and less often for the organic. The majority of those patients admitted as prepsychotic do not turn out to be psychotic, but if they do the diagnosis is usually schizophrenia.

Though these cases were sent for in-patient care because of the severity of their problems, it is some indication of the prevailing diagnostic uncertainty that only half had been placed in any of the main clinical groups, though nearly all had been referred by psychiatric specialists. Where diagnosis had been attempted it stood the test of in-patient observation and full investigation in two-thirds of all cases, but schizophrenia tended to be over-diagnosed at the expense of neurotic, psychopathic and epileptic states. In females particularly, patients were referred as schizophrenics who subsequently proved to be cases of hysteria. In view of the need for early treatment, it is satisfactory to find that so damaging a disease as schizophrenia was not often missed.

The most frequently occurring types in *hospital in-patient* practice are schizophrenias, neuroses and psychopathic personalities in practically equal numbers. The next in frequency are the epileptics, various organic states, post-encephalitic, post-traumatic, etc. Outstandingly low were the numbers of manic-depressives. Only one boy of fifteen years showed anything like a cyclothymic picture clinically, and one other a manic reaction. Both were discharged in a very satisfactory if not completely recovered state. There were but twelve patients who could properly be regarded as depressed to a psychotic degree. Three had made definite suicidal attempts. These depressions were mainly of " reactive " type (i.e., chiefly in response to stress), and sometimes occurred as episodes in psychopathic personalities. Most were short in duration, and only one was suitable for E.C.T. as described in the section on treatment. Paranoid and delusional symptoms were seen as transitory features of schizophrenic and psychopathic states rather than in systematized form. Sustained catatonic types of schizophrenia were unusual, but occurred in episodes.

Neurotic conditions were common, and in males the anxiety state predominated in the juvenile pattern of tension, tics, activity and behaviour disorder. Obsessional neurotics were rarely encountered, but obsessional ritualistic compulsive behaviour in schizophrenics was quite frequent, and seemed to represent a defence of a sort against further schizophrenic development. The adult anxiety type with psychosomatic symptoms and phobias was much less frequent. By contrast hysterical neurosis prevailed most often in the females, usually with recognizable hysterical personality features, conduct disorder and conversion of conflict into physical symptoms.

Psychopathic personalities constituted just under one-third of all admissions, including those with neurotic and psychotic complications. Since these patients may simulate other disorders, at least for a time, some had to be admitted for investigation. The grossest psychopaths appear where heredity and environment have conspired jointly to produce deprivation or arrest of moral and emotional development, a chronic emotional malnutrition as it were over years, which as experience shows can only be corrected by years of training and the assistance of a delayed maturation of the central nervous system. As a group they are quite unsuitable to be mixed with neurotic and psychotic types because they tend to gang up for aggressive purposes, to bully others and interfere with them. They need more supervision and staff than any other type. A few can be termed " reactive psychopaths," and have been disturbed by some precipitating trauma at home or elsewhere. These tend to settle down under the security of a hospital régime. In the others it is more usual to find that they are relatively quiet until they have taken the measure of the situation or become a prey once more to their innate restless aggression.

Approximately a tenth of all cases were found to have an epileptic constitution, often not suspected previously, and in which neurotic, psychotic and psychopathic disorders had developed. Organic illness had led to psychiatric breakdown in 5 per cent. Trauma, infection of the meninges or of the substance of the brain, and tumour were the main causes. The post-encephalitic cases were all hyperkinetic in type, and it is of interest that in this group, besides symptoms characteristic of post-encephalitis, there were others which bore the personality traits of the parents.

It is evident from the foregoing that after 12 years of age one can apply much

of the classification used in adult psychiatry, provided allowance is made for the changes which adolescence imposes on the clinical picture.

The foregoing remarks on classification indicate the types of case admitted to the juvenile unit between 12 and 17 years of age. Many patients have to be admitted for investigation in the first instance, since in the early stages of illness the only obvious feature may be some form of behaviour disorder, which in the juvenile period may prove to be the first phase of many forms of juvenile breakdown from schizophrenia to cerebral tumour.

Aetiology.

The approach to psychiatric disorder in the juvenile or adolescent period is based on the fact that it is essentially a phase of development and change. This constitutes a third factor as it were, a joint product of the fundamental factors of genetics and environment, all requiring consideration when responsibility for cause of breakdown is assessed. All cases need careful survey, both physically and mentally, for abnormal developmental trends. As with adults, breakdown is generally the result of a combination of factors, both predisposing and precipitating. Arrest, precocity and unevenness in development may each be concerned aetiologically. Examples of such causal factors in the physical sphere are endocrine abnormalities, e.g., hypothyroidism, infection by infantile paralysis or post-encephalitis, and many forms of intellectual defect or precocity. In the mainly psychological direction one finds the insecurities, anxieties and hostilities of the maladjusted family, and at times psychological reactions to puberty. Since deprivation is strongly associated with development, it is unfortunate that the so-called deprived child or juvenile should be almost exclusively regarded as " emotionally " deprived or delinquent. The patients of this unit and elsewhere are deprived in various fields, not only emotional, but intellectual, hereditary, social, material, endocrine and others. Equally an excess of growth, intellectual and emotional development may be productive of breakdown. For instance, the role of the emotions in development is illustrated in the investigations of Widdowson (1951).

In a group of children of from 4 to 14 years, he has shown that anxiety stimulated by unsuitable personal supervision may retard physical growth in spite of adequate food, compared with controls on the same food but suitable care. In another way Bowlby (1947) in his study of juvenile thieves has demonstrated that deprivation of what might be called adequate emotional nutrition in early life can produce a type of boy lacking all ordinary affection. The E.E.G. may reveal maturation defect or unsuspected epileptic tendencies, and the psychologist often provides valuable data on intellectual capacities, or on schizophrenic, organic or other personality trends. Even with such assistance it is still difficult to discuss causation realistically, and to know why one youngster breaks down and another does not, though both are subjected to similar stresses in similar situations.

Treatment.

In many this begins on entry to the unit, since interpersonal and other stresses are so severe at times that removal of the youngster to an ordered and secure hospital atmosphere of itself effects much improvement. In a few a chance to stabilize the situation is all they need, but in most this initial gain needs further therapeutic support after investigation of patient and family.

Though separation from the home environment often has distinct advantages at first, sooner or later effort has to be made to adjust the patient to home and *vice versa*. In this phase trial periods at home are needed, and at times the parents or their substitutes may need as much interviewing as the patient. Parent and patient may require to be seen together, often a most illuminating event. In some cases with distant homes the absence of the necessary contact with relatives has been a considerable handicap.

The juvenile unit has its own version of the child guidance play therapy. If the unit is to avoid becoming a confused, disgruntled collection of youngsters acting out various morbid tendencies on each other, it is necessary to have a programme of suitably blended activities, which will provide therapeutically for their needs in social, educational and recreational fields. From the psychiatric point of view these activities not only form a series of test situations, the patient's response to which can be diagnostically useful, but are a means of achieving improved contact

and rapport. Education is supervised by two qualified teachers in small groups in school subjects daily, rather than in large classes. Art, play reading and dress-making tuition are given weekly under the Surrey Education Authority tutors. Occupational therapy is mainly through carpentry, various handicrafts, gardening and tailoring. Physical training, games indoor and outdoor, documentary and ordinary films, stamp collecting, excursions to local events, etc., all play a useful part in satisfying various needs. The foregoing yield information of diagnostic and therapeutic value, and are the counterpart, to some extent, of the play therapy situation in the child. While all these activities have their place, the most important single factor in daily affairs is the sympathetic management of nursing staff, who have to make suitable response not only to many tokens of affection, but to occasional impulsive attacks.

Psychotherapy.

Neurotic and depressed juveniles have responded well as a general rule to psychotherapeutic approaches on a relatively simple plane. Some are talkative enough from the start; others at first show various degrees of inhibition, resistance and sullenness, characteristic of the reticence of this age-period where personal topics are concerned. As Warren (1952) has said, it may be months before enough confidence is gained. By using intravenous or oral methedrine or sodium amytal much progress could be made in from one to four weeks, sometimes using a group of such assisted interviews in a period of several days. At times juveniles refuse to discuss difficulties which might appear relatively ordinary to an adult without the aid of this rather special procedure. For example, it was a long time before one youngster showed that part of his refractory conduct derived from his anger at the lack of letters from home.

Caution is necessary to avoid arousing too severe a disturbance in adolescents who, on account of their emotional immaturity, are more likely to develop states of excitement. Those psychiatrists who practised abreactive techniques in the last war will remember how it was found necessary to keep the patient awake to stabilize the progress made under sodium amytal or ether, and to prevent subsequent forgetting of significant material. With juveniles this danger is less, and quite often after methedrine it is advisable to give sodium amytal or other quick-acting sedative to control excessive emotional reaction. Full psycho-analysis is not possible with the present turnover of patients, and in any case would only be suitable for a few.

Physical Methods.

In this juvenile period some methods of established position in the treatment of adults have been found less useful, while others having been tried and found wanting in older patients, are showing promise when applied to juveniles. Physical methods in frequent use are insulin comas, prolonged sleep, and endocrine treatment. Perry and Levy (1950) stress the malignant course of adolescent and pubertal insanity in 273 cases in an American State Hospital, and show that only one in ten of those admitted before eighteen years have a chance of avoiding a lifetime in hospital at a cost of 30,000 dollars to the community. They contrast the poor results of " shock " treatment in the juvenile psychoses with the results in the adults.

Insulin Comas.

Levy and Southcombe (1951) noted only 6 out of 41 insulin-treated juvenile schizophrenias as making satisfactory adjustment out of hospital. By the same methods the authors obtained more than double the number of good results in their adult schizophrenics. In our own group of 48 insulin coma-treated schizophrenics 7 were considered recovered, 24 improved and 17 were unchanged. In all, 31 of this group have been discharged. These results are less satisfactory than in adults, but it is doubtful if valid comparison can be made between adult and juvenile. Furthermore, any series of results can only be assessed in proportion to the number of cases which can be regarded as acute schizophrenic episodes, who often do well, as opposed to those with long-standing failure to adapt to ordinary stresses from their earliest years. The average coma dose was 210 units in males and 220 units in females, i.e., similar to adults. Technical difficulties were the greater liability to fits in the hypoglycaemic period, small veins for intravenous and small stomach

capacities for nasal interruptions, and risk of interference with hypoglycaemia by surreptitious sweet-eating.

Prolonged Sleep.

In adults there has been a tendency to use E.C.T. rather than sleep treatment in various acute states of excitement and confusion, whether depressive, schizophrenic or neurotic in origin, since the effect is more rapid, the technique more simple and no additional toxicity is involved. On the whole in juveniles the reverse obtains, the response to E.C.T., if any, is often temporary, and sleep treatment has been much more effective, possibly with less risk of damage to the immature nervous system. It has also proved more useful as a means of improved rapport and abreaction. For producing sleep sodium amytal gr. vi to ix four-hourly, supported as necessary by paraldehyde, drm. ii, has been tolerated well by all cases, although these are usually adult doses.

E.C.T.

In view of the small incidence of psychotic depression noted in the section on classification, it will be evident that the scope and value of this method in juveniles, as compared with adults, is greatly reduced. Only 33 patients were treated, including 30 schizophrenias, 2 aggressive psychopathic personalities and 1 suicidal psychotic depression.

There has been much controversy over the possible traumatic effects of E.C.T. on adult brains, and though the sensorial, E.E.G. dysrhythmias and other abnormalities are generally temporary, it was considered that, until some proof to the contrary was produced, much caution was needed in using it on those whose nervous systems were still immature and unstable. This seemed justified when it was found that states of excitement and overactivity of " hypomanic " quality had resulted temporarily in 5 out of the 30 schizophrenias, all of whom were particularly immature and unstable. The complication occurred after but 3 E.C.T. in two cases and after 5, 6 and 8 in the remainder. In 8 schizophrenias whose mood was strongly if abnormally maintained there was a good response apparently leading to discharge. In the remaining 18 patients 5 had acute symptoms temporarily alleviated. In some of these last cases E.C.T. was given during insulin sopor, where response to insulin comas had been slow. The rest showed no change of note. As regards the three other types treated, the psychopathic personality cases were not benefited, but the patient with psychotic depression reacted well, only to relapse owing to persistence of strong personal conflicts which hours of patient psychotherapy had failed to relieve in or out of hospital.

Experience with the juveniles has done nothing to alter the view that while convulsion therapy is almost specific for the psychotic depressions in the maturity of late middle age, treatment of depression in the juvenile period is usually a matter of psychotherapy, preceded at times by prolonged sleep and supplemented by relaxing or abreactive techniques. In juvenile schizophrenia rather less than a third showed any lasting gain with E.C.T., a few more were much improved in acute symptoms at least for a time, and the rest little changed. So far as could be ascertained there was no complaint of memory defect in this small series.

Leucotomy.

If at this age E.C.T. was considered with some reserve, more caution was used with leucotomy. Since the operation is so unusual in the very young, some information on the three cases given the operation may be of interest.

Case M— had a standard bilateral operation at another hospital in October, 1948. He had shown peculiar behaviour, little social contact with other children and alleged backwardness from six years of age. By twelve years he was restless, had many mannerisms and lived in a world of fantasy. Eventually he was hallucinated visually and auditorily and attacked staff. His father never liked him and finally left the home. His mother was over-indulgent but could not support him, and he lived several years in hostels. Psychological tests indicated superior intelligence. Since operation he has lost his hallucinations, is more settled and has few mannerisms. His emotional response is inadequate and he still tends to get grandiose ideas about his future, quite unrelated to practical possibilities. He showed homosexual trends for a time, but is now at 15 years becoming definitely heterosexual. He has improved after operation, but still needs care.

Case B—, 17 years, a schizophrenic patient of foreign extraction, had a standard bilateral leucotomy November, 1950. He comes of unstable and separated parents. After three years of unsettled but not grossly disturbed behaviour he became very bizarre in attitude, noisy, restless and impulsive. After operation he improved as regards acute symptoms but is still detached, has grandiose ideas of being a "superman" and on the whole has not kept his gains, though better than before operation.

Case G—, 15 years, appeared normal till two years and then mental development appeared slowed, and at six years he began to lose his speech and has since been mute. He was very excitable and tense. He was certified as mentally defective, though it was clear that he understood most of what was said to him and obeyed simple commands. Under sodium amytal he showed much affection to those near him. After operation, standard bilateral leucotomy, November, 1951, he has been more settled, less tense, but so far has only said an occasional word, though usually quite aptly.

Case W—, admitted at fifteen years of age suffering from schizophrenia, showed destructive and violent behaviour for three years, and continued to deteriorate. He was transferred to another hospital at eighteen years, and four months after a bilateral standard leucotomy was reported to be quiet, well-behaved on the whole and clean in his habits.

All four cases had trial with many other treatments before leucotomy.

There are indications that thyroid extract and oestrogens, so often tried with disappointing results in adults in the past, have value for selected juveniles, a subject which will be dealt with in another communication. Treatment of inadequate psychopathic, anxious and schizoid personalities by dehydroisoandrosterone has been outlined elsewhere (1952).

Disposal.

70·8 per cent. were discharged home, 12 per cent. to hostels, various types of homes and residential schools, 10 per cent. to other hospitals and 7 per cent. absconded. When disposal is examined according to the chief diagnostic categories there was a marked difference between the three largest groups of neurotic, schizophrenic and psychopathic cases. Only 25 per cent. of the psychopaths could be discharged home, as opposed to 84·5 per cent. of neurotic and 85·5 per cent. of schizophrenic patients. This is not a reflection of any particular disposal policy amongst groups, except that home was considered as first disposal wherever possible. In general it can be said that where constitutional factors were prominent, as in psychopathy, epilepsy, organics and defectives, there was a greater likelihood of institutional care being necessary.

Results on Discharge.

	Recovered.	Improved.	No change.	Total.
Schizophrenias	12	23	11	46
Psychopathic personalities	1	40	28	69
Neuroses	10	33	4	47
Organic states	1	7	4	12
Epilepsies	1	18	4	23
Affective psychoses	6	7	1	14
Mental defect	0	4	2	6
	31	132	54	217

So far as possible cases of doubtful diagnosis have been omitted. Because of the poor prognosis generally attached to juvenile schizophrenia the above results are of interest, and to some extent can be accounted for by the acute cases who, though floridly schizophrenic, were on the whole prognostically favourable. In reviewing all the cases of schizophrenia admitted to the juvenile unit, whether subsequently discharged or not, under 30 per cent. were considered to be of an essentially chronic type. In my view, the full use of physical methods of treatment also contributed to the better outcome in many cases. The results and the disposal of the psychopathic personality group emphasize that for the majority of these cases investigation rather than treatment is the chief reason for considering hospital care. Follow-up studies are in progress.

I would like to express my grateful thanks to Drs. G. H. A. Chamberlain and A. M. Gregory for their assistance with the clinical work of the juvenile unit, and also to Miss B. S. McFie, Psychiatric Social Worker to the unit.

References

BERGMAN, M., WALLER, H., and MARCHAND, J., *Psychiat. Quart.*, April, 1951, **25**, 294.
BOWLBY, T., 44 *Juvenile Thieves*, 1947. Baillière, Tindall & Cox.
LANDIS, C., and PAGE, J. D., *Modern Society and Mental Disease*, 1938, Chap. 4. New York: Farrar & Rinehart.
LEVY, S., and SOUTHCOMBE, R. A., *Arch. Neur. and Psychiat.*, January, 1951, **65**, 54–59.
PENROSE, L., *The Biology of Mental Defect*, 1949, p. 203.
PERRY, H. A., and SOL, LEVY, *Dis. Nerv. Syst.*, April, 1950, **11**, No. 4, p. 111.
SANDS, D. E., and CHAMBERLAIN, G. H. A., *Brit. Med. J.*, 1952, ii, 66.
WARREN, W., *Lancet*, January 19, 1952, No. 6699, p. 147.
WIDDOWSON, E. M., *ibid.*, June 16, 1951, p. 1316.