

Current Practice

PRACTICAL PSYCHIATRY

Mentally Handicapped Persons

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Brit. med. J., 1968, 4, 687-690

In choosing a title for this contribution I have deliberately used the word person, not patient. This distinction is important. Not all mentally handicapped people are patients, and it may be bad psychology to regard them as such. Some of the mentally handicapped are overprotected by their parents, perhaps especially by parents who are better endowed intellectually or economically. This may increase their degree of handicap. There is no sharp distinction between the mentally handicapped and the general population. The difference is one of degree (Table I). A figure of 3% is often quoted, and it is commonly said by American organizations wishing to draw attention to the size of the problem that there are six million retarded Americans. This kind of approach is not very useful in regard to the medical care of the individual, though valid for administrative purposes. Most of these millions of people manage fairly well with a bit of help from other members of the family, from neighbours, and others, so that they may never need specific medical or psychiatric attention. They will get by in special or ordinary school. If they are fortunate they will acquire some reading, writing, and arithmetic; if economic conditions are good they will hold an unskilled job. If they have an adequate home they will probably not get into trouble with the police. Many of them will marry and some of them will bring up families.

TABLE I.—*Intelligence Classification According to I.Q.—Ages 10-60 (Actual)*

Classification	I.Q. Limits	Per Cent Included
Defective	65 and below	2.2
Borderline	66-79	6.7
Dull normal	80-90	16.1
Average	91-110	50.0
Bright normal	111-119	16.1
Superior	120-127	6.7
Very superior	128 and over	2.2

From Wechsler, D. *The Measurement of Adult Intelligence*. Baltimore (1944).

Those people who need special help and who are of limited intelligence without being grossly retarded come to attention because they have poor homes or because they are emotionally unstable or because of additional physical handicaps. The current legal terms and the older terms used for the mentally retarded give a misleading impression of precision and difference from the rest of the community. An intelligence quotient has a limited value, especially in young children. It is as reliable as the skill of the psychologist, the reliability of the test, the suitability of the test situation, and the state of the person examined at the time allowed. It may, however, be useful to set out a few of the terms in use and their rough equivalents in terms of intelligence quotient (Table II). It should be remembered that the I.Q. does not figure in legal definitions in Britain. Also legal definitions have now lost much of their importance with the disappearance of statutory ascertainment of mental defectives and with the abolition of legal "certification" for all but a minority of patients detained in hospital.

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Severe Handicap

So far as younger children are concerned the general practitioner is likely to be asked for advice only about the more severely handicapped in regard to intelligence and development, though there is always a proportion of parents who will require reassurance about a normal infant. By the time children have reached 5 to 7 years the proportion of the more severely handicapped will have fallen to about 0.4%, though at birth it may be as much as 1%. There is a fairly heavy differential mortality. Figure 1 illustrates this in the case of Down's syndrome (mongolism). Similarly reliable data are not available for the severely mentally retarded in general, but these figures may be

TABLE II.—*Equivalent Terms Used in Mental Deficiency*

Equivalent Terms	I.Q.	% Age Population (at Age 7)
Mildly mentally retarded Subnormal Feeble-minded Moron Débile Educationally subnormal Medium grade mentally retarded Imbecile Trainable Severely mentally retarded Idiot "Untrainable"	50-70 20-49 0-19	1.5 0.32 0.08

taken as a rough guide for the expectation of life of imbeciles or patients with an I.Q. of 20 to 50. Perhaps half of them will fail to reach the age of 5 years. On the other hand some of them reach 50 years and more. While it is only realistic to help parents to understand that such children are delicate they should not be led to believe that the child will necessarily die young. Sometimes the father and mother have this impression and make all their plans accordingly, not realizing that their handicapped child may outlive them. It is very difficult to give a prognosis for life in an individual case, but this is correlated with the degree of handicap. Thus in mild mental retardation (I.Q. 50-70) life expectation should be only a little less than that of the general population; in imbecility it is, as stated, much worse. In idiocy (I.Q. 0-20) it will be very much worse. Life expectation is also related to degree of physical handicap. In Down's syndrome children with congenital abnormality of the heart are more likely to die. Cerebral palsy also reduces the life span and increases the risk of inhalation pneumonia. But some helpless, bedridden idiots will attain an age of 50 or more.

Development

Severe mental retardation is usually due to some static brain lesion. This will not get worse, nor will it get better. On the other hand the child will continue to develop. From a

practical point of view the main consideration is the remaining abilities of the patient. In this respect also there is a gradation from complete normality to profound idiocy. In general the retarded child develops parallel to the normal child but at a slower rate. The slowness of the infant who will prove to be educationally subnormal (I.Q. 50–70) is not very conspicuous at first. It may become noticeable at the age of 5 years, when the child is due to attend school, or later. In "aspirant" families the problem may declare itself at an earlier stage. It may be more obvious to the parents in later children; their first child may be more readily accepted as normal even if he is slow.

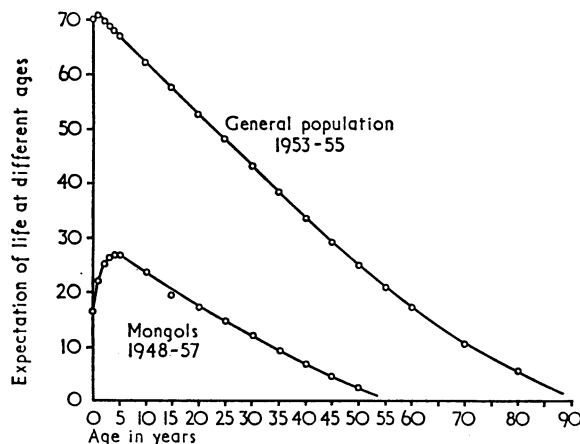


FIG. 1.—Expectation of life in Down's syndrome. After Collman, R. D., and Stoller, A., *J. ment. Defic. Res.*, 1963, 7, 53.

In children with medium grade defect, imbecility (I.Q. 20–50), the defect is more conspicuous and is likely to be noticed earlier. But these children also, as a rule, do continue to develop as long as they are children. Such a child at the age of three years may be just learning to walk, his speech may be at a one year level and likewise his ability to feed himself and to respond to toileting. At 9 years the same child may be much more developed, may walk confidently, climb stairs, have a considerable vocabulary, but his attainments may only be those of an average three-year-old. While parents of a child with mild mental retardation who is accepted as suitable for attendance at a special school may reasonably look forward to their son or daughter being able to take an independent place in society and a simple job in open employment, the parents of the more severely handicapped cannot look forward to this. Recent studies have shown that with suitable training children with medium grade mental handicap (imbeciles) are capable of more than was previously thought. The majority of them should be able to do useful work in a protected workshop.

The development of the most severely handicapped children (idiots) is so slow that it may hardly be noticeable. Even they, however, if they survive tend to improve and may learn to walk, perhaps to feed themselves or to be clean in toilet habits in response to regular supervision.

The concept of mental age is useful in this connexion and may be helpful to parents. Those who have several other children for comparison are often able to estimate quite accurately the mental age of the retarded child. The most severely handicapped children are expected to reach at best a mental age of 3 years while those of medium grade will at best reach an 8 year level.

Education and Training

Some activities like walking seem to occur spontaneously when a child is ready for it. There is, however, some evidence to suggest that even such a gross and instinctively based activity as this is influenced by the type of care available. This is

particularly true of such an eminently social accomplishment as speech. There is much evidence to show that retarded children's speech develops faster and more fully when they are living at home and attending a training centre than when they are resident in a large institution. As might be expected, such children also do better in a small residential unit with favourable staffing and a liberal regimen rather than in an overcrowded, understaffed hospital which is "institution-centred" rather than "child-centred."

It is axiomatic that if children are living at home then the type of care they receive will vary widely. Usually they will do better than in an institution, but exceptionally they may do badly or worse than they need. Some families are materially poor, large, and overcrowded. They may find it difficult to care for normal children and may keep a backward overactive child confined in a small space.

On the other hand the very "respectable" middle class family may grossly overprotect a handicapped child and rob him of all independence and initiative. In both of these situations good advice and help may alter the picture and remove the need for institutionalization. The most effective help for parents who are having this kind of difficulty is attendance at a unit outside the home. The special school provides for a number: since the second world war there has been a gratifying increase in the number of training centres for those children excluded from the scholastic system, and it now seems likely that these will be taken under the aegis of the education authorities. A few "special care units" and day hospitals are now becoming available which will take even the most severely handicapped children and so relieve parents of part of their burden. For younger children nursery schools, day nurseries, and "play groups" are essential. The family doctor can help by recommending and pressing the need for this kind of facility.

Progressive Conditions

A small minority of conditions causing severe mental handicap are progressive and the patient slowly loses ground. These include the lipidoses (for example, Tay-Sachs disease), the leuco-encephalopathies (Schilder's disease), and the mucopolysaccharidoses (for example, gargoylism). In this last group the disease progresses slowly if at all, and some patients may reach adult life and in childhood may well profit from attendance at special schools. Diagnosis of these disorders cannot always be made with certainty, nor should it be assumed that their existence implies early death.

Diagnosis

In most conditions treated by the general practitioner diagnosis is of prime importance. This is less true of mental handicap. In a majority of handicapped children the diagnosis cannot be established with certainty, though in all severe cases an encephalopathy can be assumed. Even when the diagnosis is obvious, as in Down's syndrome (mongolism), it alone cannot decide the prognosis and management. It is imperative to know the intellectual potential of the child and his social background. In a majority of syndromes producing mental retardation there is no specific treatment, and the problem is more educational or psychological than narrowly medical. Even so, if a precise diagnosis can be established it may have a bearing on genetic advice, and it is helpful psychologically to many parents to know the cause of their child's handicap. In a few cases, as in phenylketonuria and galactosaemia, early diagnosis is vital, though this needs to be established if possible by screening before symptoms are displayed. Any child who is showing evidence of delayed development should be subjected to full diagnostic assessment in a paediatric or child psychiatric department. This will include biochemical screening for metabolic errors, examination of the urine for mucopolysaccharides, of the lymphocytes for inclusions or vacuoles,

possibly an E.E.G., and in cases of a young mother who is anxious for advice about further children procedures such as diagnostic appendectomy may be justifiable in a severely retarded infant. Clinics for advice to parents of handicapped children are gradually becoming available, and these may be run by paediatric departments, by local authorities, or by hospitals for the mentally retarded, or as part of a child psychiatry service.

Some integration of such efforts is gradually taking shape. At present the general practitioner has to rely on advice from his medical officer of health about what facilities are available and on his knowledge of which psychiatrists and paediatricians are specially interested in the problem or conduct advisory clinics. Many parents obtain useful information about local facilities as well as moral support from membership of the National Society for Mentally Handicapped Children, 86 Newman Street, London, W.1. Short term care in the local hospital for the mentally retarded is a very useful measure to help parents over a particular crisis such as the birth of another baby, and it also gives the hospital an opportunity to conduct a full assessment of the patient. Attendance at a day hospital has the same advantage, and in the case of older patients permits assessment of working potential.

Advice to Parents

Parents of mentally handicapped children need a great deal of moral support. A busy family doctor may be able to give them only limited time, but his attitude may be all important. If he is kindly, sympathetic, and interested the parents' ability to cope with their problem may be very much strengthened. This is particularly true at a time when parents are first realizing that their child is different from other children. In such a condition as Down's syndrome this will be immediately after birth. In other cases it may be very much later. Many members of the public feel a marked distaste for psychological abnormality. This reaction is often mixed with fear. Membership of the medical profession does not carry exemption from this kind of attitude, and parents are quick to sense hostility or dislike of the problem in their medical advisor. Their own attitude at an early stage is likely to be strongly influenced by the way in which those to whom they turn for advice react. If they believe that they meet with lack of sympathy this may encourage them to reject the handicapped child in some cases or to become excessively protective or unrealistic in others. Opportunities for explanation, discussion, and reassurance are very much welcomed. It is important to be honest and frank. Parents appreciate being told about such conditions as Down's syndrome, gargoylism, or phenylketonuria as soon as they are recognized and like to know the full implications. They will also appreciate the fact that with younger children it is impossible to make dogmatic statements and will usually be grateful for referrals for a specialist or second opinion.

Other Handicaps

Mentally retarded children are more often ill than other children. Parents may be very sensitive about the attitude of the family doctor to the mentally handicapped child when he is unwell. For this reason alone it is important to pay the same amount of attention to intercurrent illnesses in the backward child as to those in his normal brothers and sisters.

Many of the mentally handicapped have other defects as well—cerebral palsy, epilepsy, heart lesions, deafness, eye lesions. These need treatment as in a child of normal intelligence. It is always possible that the disturbed, retarded, deaf child is disturbed and retarded because he is deaf. If the child who is blind after maternal rubella is operated on for his cataracts this may have a beneficial effect on his mental state.

In any event, with many physical handicaps it is difficult in young children to estimate what the probable outcome in terms of mental development will be, and they should be given the benefit of the doubt.

Genetic Advice

Most parents of mentally retarded children are themselves normal and increasingly may seek advice about the risk of further children being retarded. The overall risk of a further severely retarded liveborn child is of the order of about 3%. In a minority of cases a more specific risk can be quoted, varying from the same risk as in the general population if the condition is due to maternal rubella, to 50% if one parent and the affected child have tuberous sclerosis, or even 100% in one very rare form of Down's syndrome.

Before embarking on this or any other kind of advice which may have profound significance for the parents of the handicapped child it is essential to have all the facts at one's disposal about the child and about his family. If in any doubt it is better to refer the family to a genetic advice clinic or to a psychiatrist or paediatrician with a special knowledge of the problem. In view of the infinite human capacity for misunderstanding, subsequent discussion and clarification by the family doctor will often be necessary. Having a mentally handicapped child is usually a very traumatic experience; this may result in parents of such children being angry, resentful, guilty, ashamed, secretive, unco-operative, or generally "difficult." The family doctor can do much to encourage healthy adaptation in both the child and his family.

Illustrative Cases

A.B. aged 28: The only child of a senior secretary and of a mother who had been a shorthand typist prior to her marriage. The mother had been subject to depression. The patient had attended no fewer than seven schools, all private and mostly residential, finally leaving at age 18.

The mother died two years ago and the father felt unable to manage the patient, complaining of her incessant chatter. She is a pleasant, well-behaved woman who does some housework and washing. She can do simple writing and reading. She used to go roller skating, horse riding, and swimming, but has not done this since the death of her mother.

Birth was by emergency caesarean operation and there was probably perinatal damage.

On assessment she scored a verbal Wechsler I.Q. of 68 and a performance of 59. Her reading age was 11 years and 8 months on the Schonell test. She was rather tense and tended to talk too much.

This patient had been severely overprotected. She had little experience of a working environment and had had no opportunity to do things for herself. Had she gone to a good special school for the educationally subnormal she might well have been got out to a job. She will now attend an industrial training unit daily to assess her employability. An effort will be made to find a residential job for her.

C.D. aged 3 years 8 months: This little girl was born in London, being the third of four children of Jamaican parents. The father is a carpenter. The mother, a steam press operator before her marriage, suffered from recurrent psychosis. The family has three rooms and the patient shares a bed with two of her sisters. She developed normally for 2½ years, when she was admitted to hospital with paint in her mouth and convulsions followed by hemiparesis. On one occasion the serum lead level was estimated as 96 µg./100 ml. during an attack of diarrhoea, but on another estimation it was 42 µg./100 ml. (currently accepted normal up to 37 µg.). There were no other signs of lead poisoning, and this was not thought to be a case of lead poisoning. The moderate increase in lead was probably due to the marked pica she displayed.

This child was admitted to paediatric wards in two hospitals, both of which found it impossible to cope with her restlessness. In psychological development, including speech, she assessed at 18

months when her age was 31 months. The E.E.G. showed a non-specific epileptic record.

On admission she was a pleasant, boisterous, friendly child of educationally subnormal level. She could not be cared for at home in view of her mother's mental illness, for which the mother was admitted to hospital. Prior to this the child had been attending a day nursery, where she was no problem.

This disturbed little girl with a static brain lesion was a great problem when confined at home or in a hospital ward. When allowed more freedom and scope for activity the difficulty disappeared. (Day facilities such as nurseries and play groups are essential, as are residential nurseries on occasion.) This type of behaviour disturbance can usually be treated more successfully by manipulation of the environment than by drugs.

E.F. aged 6: He is now in a paediatric unit in another hospital and is a case of Apert's syndrome or acrocephaly syndactyly. This is a very severe congenital deformity, and doubtless on this account this child has been kept in hospital all his life. It may have been assumed that it would be difficult for the parents to care for him or that they could not tolerate his deformity. They in their turn have now accepted the position and have moved to another part of the country and have no contact with the child.

At 4½ years he scored no items on the Stanford-Binet scale, his mental age, therefore, being less than two years. On the Piaget scale he rated at an 18 month level and on the speech scale at a 7 month level. He was walking, running, using a spoon and cup, and was clean and dry. His attendance at a day training centre from the hospital has been arranged. He is doing well at the centre, but is kept in the ward under a net over his cot, doubtless

because of fear that he may interfere with other cases with surgical procedures in the ward, etc. This is understandably frustrating, and the child is unsuitably placed.

If at all possible cases of this kind should not be kept in hospital, they should be taken into hospital only as and when any essential surgery—for example, for the syndactyly—is necessary. If he had lived at home his accomplishments would almost certainly have been better than they are now, and he should have been quite manageable at home and could have attended the local day training centre. Parents usually adapt to the deformity in such cases if given the opportunity. There is a professional tendency to overprotect the parent in such cases.

FURTHER READING

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TODAY'S DRUGS

Vitamins of the B Complex

The following water-soluble vitamins are included in the B complex: aneurine hydrochloride (thiamine or vitamin B₁); riboflavin (vitamin B₂); pantothenic acid; biotin; pyridoxine hydrochloride (vitamin B₆); and nicotinic acid (niacin, nicotinamide, vitamin B₃). Vitamin B₁₂ and folic acid, though strictly speaking B group vitamins, are not usually considered under this heading. The use of these two vitamins has been discussed in previous articles in this series.

In areas of the world where there is serious malnutrition clinical syndromes occur owing to deficiencies of specific B complex vitamins. Thus, vitamin-B₁ deficiency causes cardiac failure (wet beriberi), and may be a factor in nutritional peripheral neuritis (dry beriberi). Nicotinic acid deficiency leads to pellagra with its classical triad of symptoms—dementia, dermatitis, and diarrhoea. Precise clinical syndromes associated with deficiency of other vitamins of this group are less well defined, but it is usually assumed that if there is deficiency of one vitamin of the B complex others will also be lacking. Thus it is that these vitamins are often considered together, and many pharmacological preparations contain mixtures of these substances.

But how often is it really necessary to prescribe B complex vitamins in modern Britain? Doctors clearly think there is a need for them, for there are about 1,000,000 prescriptions for these preparations each year. The vast majority of these are probably given prophylactically and are unnecessary. Perhaps they are used because patients are brought up to think they are good for them, and doctors know they are harmless. However, even in Britain, deficiency of vitamins of the B complex does lead to definite clinical syndromes. These conditions are important to recognize, as they can usually be cured by appropriate treatment. In this article the use of B complex vitamins will be considered under two headings; treatment of specific syndromes and prophylaxis.

Treatment

B complex vitamins are used to treat diseases of the following systems:

Cardiovascular.—Cardiac failure due to vitamin-B₁ deficiency (wet beriberi) is probably seen a few times a year at most large district hospitals. The patients are usually alcoholics. Their cardiac failure is of the high-output type, with a hot periphery and a bounding pulse. This form of cardiac failure may resemble that due to thyrotoxicosis, cor pulmonale, or anaemia, but these diagnoses can be excluded by appropriate investigation. Beriberi heart failure is often cured within a few days of admission because the patients receive adequate amounts of thiamine from the ward diet. Thus, unless the diagnosis is considered immediately, the opportunity for proving it by pyruvate tolerance or other tests may be lost. The condition is cured by treatment with aneurine hydrochloride 20 mg. t.d.s. for two weeks.

Neurological.—Wernicke's encephalopathy, or cerebral beriberi, is occasionally seen in Britain. It is also due to vitamin-B₁ deficiency. The condition presents as a confusional state with signs of mid-brain involvement. It occurs in chronic alcoholics and after long illnesses associated with vomiting and poor dietary intake. On examination, in addition to confusion and disorientation, the patient has nystagmus and oculomotor nerve palsies. This condition is treated with large doses of vitamin B complex, and the use of intramuscular or intravenous injections of Parentrovite, which contains massive amounts of B complex vitamins and also vitamin C, is a simple and satisfactory method.

In Ménière's disease large doses of nicotinic acid have been used in an attempt to prevent the attacks. Nicotinic acid causes vasodilatation, but it does not appear to affect cerebral blood flow in man, and is thus unlikely to improve blood flow to the internal ear. There is no evidence that this form of treatment is of any value in the management of this condition.