MEDICAL PRACTICE

Today's Treatment

Psychological Medicine**Mental Handicap and Syndromes of Brain Damage in Children**

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British Medical Journal, 1975, 2, 71-73**Introduction**

Mental handicap is not a single syndrome comprising lack of intellectual capacity sufficient to require the use of special educational and health service facilities. A too simple approach to it prevents the utilization of the appropriate services for a particular child. This article is primarily about treatment, but it is important to have some knowledge of the different categories of mental handicap.

Basically there are two categories of mental handicap—subcultural handicap and pathological handicap. Subcultural handicap is a condition of mild handicap (I.Q. 50-70) in which poor genetic endowment (for example, from parents of modest intelligence) is compounded with social and educational disadvantages. These children are apt to come from large families, usually in slum areas of substandard housing, with the father in an unskilled manual job or, more commonly, out of work. Often two or three children in the same sibship are ascertained as mentally handicapped and recommended for special education. This category (subcultural handicap) is certainly the commonest syndrome in mental handicap. Some authorities consider it accounts for 75% of all cases.

The pathological group includes genetic unifactorial disorders such as phenylketonuria (recessive) and epiloia (dominant), chromosomal disorders such as Down's syndrome (mongolism), spastic syndromes such as cerebral diplegia or hemiplegia, brain damage from trauma or encephalitis with

resulting epilepsy and mental handicap, and many other syndromes such as spina bifida which may result in mental handicap. In addition there are a group of children variously described as being autistic or suffering from childhood psychoses. Many of these appear to have sustained minimal degrees of brain damage and some present as hyperkinetic problems.

Treatment Facilities

Though the diagnosis of mental handicap is primarily the province of paediatricians and psychiatrists in the mental handicap field, there is one condition whose early recognition by the family doctor is absolutely vital—namely, the “battered baby” syndrome. In fact battering may affect young children as well as babies, and it is of very great importance that family doctors are alert to this problem.

Apart from dietary treatment for children with phenylketonuria and anticonvulsant medication for children with epilepsy, there is very little *specific* medical treatment for severely handicapped children. But for these patients “treatment” embraces all sorts of other things such as education, day care, and speech therapy. Moreover, the parents often need help as much as the child. Below are listed the possible range of helping agencies and services which may be invoked to help the child and its family.

FOR THE CHILD

(1) Referral to paediatrician or mental handicap specialist for multidisciplinary assessment.

(2) Referral to paediatric surgical specialist. This usually relates to a spastic child and the object is to keep him ambulant and prevent abnormal postures and contractures.

(3) Physiotherapy is usually instigated by the paediatrician or surgical specialist, but the family doctor may need to ensure that such help is secured, particularly in regard to domiciliary physiotherapy.

(4) Speech therapy is available once the child gets to school, but the family doctor should keep in mind that many mentally handicapped children have speech problems, so that referral to the neurological clinic, with this problem clearly stated, may be helpful.

(5) By the age of 5 years most mentally handicapped children are placed in special schools or junior occupation or day care centres. But there are families who move from one town to another and do not indicate the needs of their child when they arrive at their new address. The general practitioner should make contact with the clinical co-ordinator of child health services. But even before school most mentally handicapped children would benefit from play groups or nursery placement, and the health visitor should be contacted to initiate such placement.

(6) Families find it very difficult to get dental care for mentally handicapped children. In some areas there is a school dental service specifically for mentally handicapped children and in others the dental hospital will accept referrals of mentally handicapped children. Usually this means sessions of "whole mouth dentistry" under anaesthetic, because the more severely handicapped children simply cannot cope with ordinary dental procedures.

FOR THE FAMILY

The family has problems also, and when the family doctor is consulted about a mentally handicapped child he should consider what services to invoke.

(1) Special attendance allowance (Form DS 2C). The grounds for application are set out in Leaflet NI 182: frequent or repeated attention by day or night or continual supervision to avoid substantial danger to himself or others. The parents must fill in Form DS 2C, which they get from the local social security office. The form is complicated, and perhaps the health visitor attached to the practice could help the parents in filling it in. The form is then sent back to the department of social security, which later requests the family doctor to make an examination of the child. For day and night attendance the allowance is £8.00, for day only it is £5.35.

(2) Any family with a severely handicapped child must be referred for genetic counselling. I visited a family recently with two microcephalic children. It appeared that another three cousins had similar problems. It is most important that these families get genetic counselling about their plans for further children and so that their children, in due course, can be properly advised.

(3) Many parents need counsel, support, and even psychotherapy in relation to their emotional reaction to having produced a handicapped child. The response may be guilt or ambivalent rejection, but most of these families need support or psychological help or both. In many cases a social worker (if trained in psychiatric methods) may help considerably by allowing the parents, especially the mother, to work through her distress and come to more realistic terms with the fact of the child's handicap. In other cases recourse to the local consultant in mental handicap may be appropriate.

(4) In the early years—for example, when the child is under school age—the parents feel very isolated. The family doctor should put them in touch with the local branch of the appropriate voluntary organization, such as the National Society for Care of Mentally Handicapped Children, the Autistic Society, or the Society for the Care of Spastics.

(5) In some cases the family doctor will see that the mother must get some relief if she is not to have a breakdown. Possibly the child should go to a day nursery or day clinic. In other cases attendance as a day-patient at the local mental handicap

hospital or holiday admissions to that hospital may give the family the relief they need.

(6) In many cases the parents if given the opportunity will voice their fears about the future, "What will happen to him when we are gone?" I would advise the family doctor to refer the parents to one of the consultants at the local mental handicap hospital so that they can discuss their fears and perhaps have the child's name recorded and a file made so that periodic assessments can be instituted and final placement ensured. Alternatively the help of the local social work department can be invoked so that the family gets long-term support.

Some Mental Handicap Problems

DOWN'S SYNDROME

A mongol child aged 3 is seen. The diagnosis, already apparent from the child's appearance, should have been confirmed by chromosomal studies. If they have not been done they should be done now. Then the child and parents should be referred to a genetic clinic for counselling. If it is a heritable form of Down's syndrome, the parents, especially if they have other children, should know the probable risks for grandchildren.

There is no specific treatment for mongolism, but it is important that (a) the child gets the full value of available education, and (b) the parents get some relief from the burden of looking after the child. As regards the child, preschool education would be an advantage, starting with play group and then going to nursery school if available. The parents may be advised to persist in training the child in feeding, dressing, and use of toilet. The tendency is to be over protective, but the majority of mongols, given extended training, can learn these skills. In fact, given sufficient education, many children with Down's syndrome can learn to read and write.

The parents may need a holiday from the child. The present options are (1) residential centres provided by the social work department, (2) hospital (most hospitals take a large number of children and adults for an annual holiday), and (3) a holiday home run by a voluntary society (for example, the Society for Mentally Handicapped Children). Parents should be advised to join the local branch of the National Society for Mentally Handicapped Children. In many areas they run swimming clubs and hold children's play sessions. Dental care may be a problem. The alternatives have been discussed earlier in this paper.

Parents always want to plan for the distant future. In fact little need be done until the child is nearing the end of school life. Then the family doctor should either contact the social work department so that the family get support there or ask a consultant from the local mental handicap hospital to see the child and the parents with a view to advising on postschool management and to give an undertaking about later residential placement if this proves necessary.

HYPERKINESIS

A hyperkinetic, brain-damaged child aged 8 is seen. The brain damage may follow birth injury, later trauma, or encephalitis—for example, measles encephalitis. There may be associated epilepsy. The child is likely to show some or all of these features: restlessness, overactivity, and a tendency to self-injury. Attention span is limited and language acquisition grossly retarded. Sleep is often disturbed and sometimes punctuated by screaming attacks, and toileting skills are not evident. Sometimes there are mannerisms—for example, motor rituals such as the hand flicking movements, more commonly associated with childhood autism—body rocking, head banging, or touching rituals. These children do not play with other children, and the parents often feel they cannot get through to them.

The hyperactivity can be modified to some extent by drugs. Stimulant drugs of the amphetamine type are often advocated but are seldom effective in my experience. Small doses of haloperidol (1.5 mg t.d.s.) are often fairly effective; sometimes even larger doses are needed. But the necessary step is to try to get the child, both for his own sake, as he will not progress at home, and for the parents' sake, into some residential training programme. The available facilities vary from one part of the country to another, but generally the alternatives are (a) admission to the children's unit in the local mental handicap hospital, and (b) placement in a residential centre run by a voluntary organization such as the Rudolf Steiner organization.

It is most important to tell the parents that this placement is for a period of training (which may need to last several years) and is *not* for life; and that they should keep contact with the child, have him home for weekends, summer holidays, etc.

AUTISM

The pure syndrome of childhood autism is evident by the time the child is 3 years old—language failure, eye avoidance, finger flicking and other mannerisms, obsessional need for sameness, phobias (for example, fears of animals or going out into the street).

Hyperactivity, repetitive games, and nocturnal screaming attacks are also characteristic. However, there are many other children who show some of these features but not all of them. In every case there are four characteristics. (1) Language is disturbed: someone described these children as being tone-deaf to language. They often show echolalia, repeating the end of the questioner's sentence, and pronominal reversal, so that the child refers to herself as her. (2) They are withdrawn, detached children who show eye avoidance. They will climb on to mother—or a visitor—for a hug but they use the person like an armchair. Parents get no feedback from such children and feel nonplussed, even defeated. (3) They show finger flicking or other hand mannerisms. Sometimes they have a manneristic gait or engage in repetitive skipping, rocking, or body spinning. (4) They seem afraid of change and insist on the table arrangements—for example, their own plate, fork, and spoon—or the going-to-bed ritual becoming fixed and invariable. Often they have a special object—a piece of

string or a piece of cloth or plastic from which they cannot be separated.

These children need specialized education and social training based on learning theory. The family doctor's role is to recognize what sort of problem it is and then, alerting the clinical co-ordinator of child health services, arrange an appointment at the child psychiatry department of the children's hospital or with a consultant from the mental handicap hospital. The parents should also be advised to join the local branch of the Society for Autistic Children. Sometimes residential care becomes imperative and the alternatives are usually those mentioned earlier for the hyperkinetic child.

Advice from Family Doctor

Though the family doctor has little to contribute on mental handicap which is specifically medical, he can by his knowledge of the family advise other agencies and secure appropriate services for the child and the parents. He can secure genetic counselling for parents with a severely handicapped child and get support for the parents in the early years when they often feel isolated. When the burden of caring for the child weighs heavily, he can negotiate residential placement so that the parents get a much needed holiday. Because he knows the family he will know best how to handle their anxieties about the future. Unfortunately there is little "curing" to be done in the field of mental handicap but a great deal in the way of "caring."

Computers in Medicine

Simplified Computer-aided Diagnosis of Acute Abdominal Pain

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Summary

A simplified version of a system for computer-aided diagnosis of acute abdominal pain has been tested by "new" personnel unfamiliar with the previous system. After a two-month learning period the system proved more accurate in its diagnoses than the unaided clinician, and during the first five months of using the system the unaided clinicians' accuracy rose from 73% to 84%. When computer "feedback" was withdrawn the clinicians' diagnostic accuracy reverted towards the previous, "unaided" level.

These findings further validate the concept of the computer as a potentially valuable diagnostic aid but indicate that a training period and computer feedback are important factors in its use.

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Introduction

In a paper describing a system for computer-aided diagnosis of acute abdominal pain¹ we showed that in a practical setting the computer-aided system made significantly fewer errors than did the unaided clinician.² Nevertheless, much work remained to be done before it could be asserted with any degree of confidence that a system of that type could have any wider application in medical practice.

In particular, the system was open to three criticisms. Firstly, it used a medium-sized computing system no longer in production, and (even with present day technology) that size of system is expensive and difficult to operate. Secondly, though the system worked well in the hands of its instigators there remained no guarantee that it could be operated by other persons without extensive training. Thirdly, it could be argued that the computer itself was unnecessary and that any benefit was derived from clarification of the clinical data rather than use of the computer.

We therefore devised a further series of experiments in an attempt to overcome these points of difficulty. Firstly, we created a much simpler and cheaper system. Next we assessed its performance on a prospective, unselected group of patients with acute abdominal pain, data being fed into it by three of us (P.J.L., C.K.Y., and P.D.W.) with virtually no experience of this or any other computing system. We then continued the system as before but withdrew computer "feedback" to the clinicians—that is, though the clinicians fed data into the computer as