REMEDIAL EDUCATION IN SPECIFIC READING RETARDATION

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INTRODUCTION:

SPECIFIC reading retardation is a term used to describe a specific disability in reading - specific in the sense that the reading difficulty is not explicable in terms of the child's general intelligence (Rutter and Yale, 1976). The U.S. Congressional Bill entitled "The Learning Disabilities Act of 1969" stated that children with special (specific) learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language (Kirk, 1972). These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia etc. They do not include learning problems which are due to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantages. Specific reading retardation is therefore, one of the specific learning disabilities.

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The National Advisory Committee on Handicapped Children (1968) of the U.S. Office of Education stated that the total number of children involved cannot be accurately determined until more adequate diagnostic procedures and criteria have been developed. At the present time, the best guess is from 1 to 3 per cent at the least, and possibly 7 per cent at the most, of the U.S. school population, require special remedial education. In Malaysia, the situation may be more serious. It is estimated that 10 to 15 per cent of Malaysian school children are slow learners who fall behind the normal achievement of their age group (Anwar, 1979). The following case report will highlight the problems of a child with specific reading retardation, and describe the assessment and management.

Case Report

A 13-year old boy was brought by his mother to the psychiatric clinic, University Hospital, when she finally decided to find out once and for all, whether her fear that her son may be mentally retarded was valid. Although he was studying in Form Two, his academic performance was much below that level. In the personal history, it was revealed that he had been born six weeks prematurely and that his mother had antenatal haemorrhage in the first trimester. His milestones were delayed. He started walking at 16 months and had delayed speech. He could only make himself understood at four years of age. His mother described him as a well-behaved and obedient child before his father's death when the patient was six years old. His father, a businessman, for some unknown reason, had shown favouritism for patient's elder sister. He spent most of his time with her and ignored him. She was allowed to lie down beside him but if the patient did the same, he was pushed away. He bought toys for her but not for him. The patient started kindergarden at five years of age and was

happy in school. However, after his father's death, he was often unwilling to go and complained frequently of stomach-aches, headaches and giddiness. Since then, he had difficulty in studying and his test results were consistently poor. At the same time, his conduct changed from a well-behaved boy to a difficult, disobedient child who meddled with things at home despite being ordered not to. He was often punished for touching his sister's or grandmother's personal belongings. He was active most of the time. He could not sit still for long and always seemed to be on the move. One year after his father's death, his teenage cousin who had been looking after him died in an accident. The next year, his grandfather who had been very close to him, died of an "enlarged prostate," Patient cried very loudly during his grandfather's funeral. When he was nine, he started stealing money from his mother, servant and even from church-goers during services. He was often severely punished and eventually stopped stealing. He also used to be caned by his mother for his poor academic performances, as she thought that his poor result was due to laziness or playfulness. However, she stopped beating him two years ago, when she realized that punishment did not make him study better and friends suggested that he was mentally retarded. Recently, he had become much quieter and more obedient.

On examination, he was noted to be pleasant but rather shy. He still had thoughts of his father, cousin and grandfather and wished that they were still alive. His orientation, memory for recent and remote events, attention, concentration and judgement was good. However, his information and vocabulary was poor. He did not know the months of the year or the days of the week. He was uncertain which is right or left. His reading skill was about the level of a Standard One pupil. He was able to read and spell simple words of two or three letters e.g. "the", "or". "boy", but was unable to read or spell four-lettered words like "with", "date". His pronunciation was poor and in addition, there was a reversal of pronunciation, e.g. "was" for "saw", "tel" for "let", "fo" for "of". His arithmetic was satisfactory although he was rather slow at it. Physically, he was healthy and had no neurological deficit.

Routine investigations were normal. His skull x-ray was normal. His visual acuity was 6/6 for both eyes. Audiogram confirmed that his hearing was within normal limits. Wechsler Intelligence Scale for children (WISC) was performed. He achieved a verbal intelligence quotient (IQ) of 80, performance level of 108 and a full scale IQ of 93. Thus, his intellectual function was within the average grade. The discrepancy of 28 between the verbal and performance is significant and not due to chance alone. The Bender-Gestalt Test showed good visual motor coordination.

Evaluation of Reading Disability

The investigations so far show that this patient has a learning disorder. However, the intelligence test, even when competently administered and reliably interpreted says little about the patient's specific strengths and weaknesses, and yield only a global IQ score which, while having some predictive validity, is essentially an instrument of classification (Mittler, 1972). It rarely provides the teacher with the kind of information that is needed to enable a remedial programme to be planned. Conventional intelligence tests are now being supplemented by more specialized tests which measure specific skills and abilities, such as the Frostig Development Test of Visual Perception (Frostig and Maslow, 1973) and the Illinois Test of Psycholinguistic Abilities (ITPA). The patient performed well in all the sub-tests of the Frostig Development Test of Visual Perception viz. eye-motor coordination, figure-ground, form constancy, position in space and spatial relations. The ITPA was designed by Kirk and his colleagues after many years of research and clinical experience with mentally retarded children and learning deficits (Kirk, 1972). The ITPA showed that the patient had defect in auditory association (which tests the patient's ability to relate spoken words in a meaningful way). In addition, he was put through a battery of other tests, viz. Benton visual retention test, perceptual synthesis test, test of auditory discrimination, test of visual and auditory memory which did not reveal any defect. However, in the test of visual and auditory comprehension, it was suggested that he had difficulties relating to visual-auditory integration. It is noted that some children learn to follow short sequences but cannot grasp a sequence of events told to them in a longer paragraph or story. This difficulty is most probably caused by an inability to store and

retrieve stimuli received through the auditory channel, though it may be due to unfamiliarity with the concepts or the context in a particular narration (Frostig and Moslow, 1973).

Management

Supportive Psychotherapy including Environmental Manipulation

Psychotherapy may be needed when secondary symptoms such as loss of self-esteem and discouragement or antisocial behaviour arises as a result of reading failure. However, this should be combined with remedial learning (Thompson, 1973). The damaging effect of the poor scholastic history on the child's self-image and the resulting stresses in the family usually exacerbate earlier conflicts. Although the patient initially said that he loved his father, after several sessions, he confessed that he never loved his father and in fact, hated him for being unloving towards him. He was rather relieved that his feeling was accepted without any value judgement and he was eventually able to come to terms with his feelings for his father. Similarly, he was helped in grief-work over his grandfather and cousin, who were still very much on the patient's mind.

The patient's family was seen together and his problem was explained to them. They were reassured that he was not mentally retarded and misconceptions about brain damage, parental fault, laziness or stupidity on the patient's part were dispelled. In the assessment of his abilities, not only were his weaknesses in reading evaluated, in addition his strong point, i.e. psychomotor skill was emphasized. He was found to have good aptitude in one subject, i.e. electricity. The family was able to come to terms with his disability and their decision to send him to Montford Boys' Home for vocational training ater he had completed his Lower Certificate of Education Examination, was reinforced. In the meantime, a letter was sent to the patient's school to explain the real nature of the patient's difficulties and to request that he be regarded sympathetically.

Remedial Education

The principles of remedial teaching comprise of individuation, motivation, systematization and methodology (Frostig and Maslow, 1973). Reading instructions must be sufficiently individualized and varied to take each child's preferred sense of modality into account. If he has poor auditory perception, then he should learn by visual or kinaesthetic method and so on. The older child has often given up because of prior failure or personal difficulties with the teacher or other social and emotional reasons. By ensuring that reading meets the individual child's need for information and emotional satisfaction, the teacher can provide an incentive for conquering the new medium and at the same time, enhance the child's self-respect. The presentation of materials must be systematized and systematic reviews carried on for a sufficiently lengthy period. A variety of teaching methods have to be selected according to the needs of the individual child. However, one principle applies to all children: reading, writing, listening and oral language cannot be separated in instruction. This patient's main problem is visual-auditory integration. It is important for the patient to integrate simultaneous inputs (stimuli) from two or more sense modalities. This ability is particularly critical in learning to read, because an association must be formed between visual stimuli (graphemes) and their auditory images (phonemes), (Frostig and Maslow, 1973). To a child, the sound of the spoken word is a familiar stimulus, the visual symbol of a printed word is a new stimulus. Through repeated association of two stimuli, the child gradually learns to attach the same meaning to the sounds as well as to the symbol. He becomes conditioned to respond to visual stimuli as formerly to the spoken word (Tarnopol,(1969). The aim is to improve auditory and visual memory in addition to developing a correct, natural spontaneous flow of language which he lacks. Learning should be through meaningful associations and not by rote memory. In the first session, he was shown various flash cards with pictures and words. He was asked to repeat the words after the therapist and later when the cards with words were removed, he had to repeat the words just by looking at the picture cards. This was repeated several times, so that overlearning occurred. This was reinforced further by asking him to carry out a series of instructions, using words he had already learnt. The next step was sentence repetition, which gradually increased in complexity. For instance, he read, "I see" while looking at the flash cards of a man (for "I") and an eye (for "see"). Next, he read "I see a dog" and later "I see a dog and

a cat", etc. In later sessions, he was trained in automatic grammatical structure, so that he could have a spontaneous flow of language. Planned presentations were utilized to help him to learn the structure of the language in steps. Next, he learnt to form the grammatical automatisms necessary for the formation of correct sentences. He was taught tenses, again using flash-cards and pictures. When he had a sufficient command of language, he was helped to read paragraphs from books and also to complete stories.

After two months of intensive weekly remedial education, he had improved enough to read books by himself, such as the Ladybird Sunstart Reading Scheme, Book 4. However, at this stage, he decided to opt out of further therapy as his Lower Certificate of Education Examination was approaching. Reassessment six months later, indicated that he had maintained his reading skills. He was able to read journals like Readers Digest, and although he may not understand several of the words, he was able to get the gist of the article.

Discussion

This patient had no visual hearing or motor handicap. His intelligence is within the normal range, thus ruling out mental retardation. His lower verbal than performance score on the WISC is a feature of specific reading retardation (Rutter and Yule, 1976). Other features seen in this patient are problems in right-left discrimination, poor reading, spelling and pronunciation and sequencing. He had poor auditory-visual integration which is a common problem in learning difficulties (Tarnopol, 1969). He had a history of being restless, distractible and impulsive and these characteristics are thought to be a contributory cause of the reading difficulties (Rutter and Yule, 1976).

Specific reading retardation had often been used as synonymous with dyslexia and minimal brain dysfunction (Thompson, 1973). It is pertinent to review their relationships. The World Federation of Neurology's definition of specific developmental dyslexia stated that it is "a disorder manifested by difficulty in learning to read, despite conventional instruction, adequate intelligence and socio-cultural opportunity. It is dependent upon fundamental cognitive disabilities which are constitutional in origin." However, this definition had been shown by Rutter and Yule (1975) to be unsatisfactory. They raised objections to the terms "conventional instruction", "adequate intelligence", "socio-cultural opportunity" and "fundamental cognitive disabilities". They found that most of the characteristics included under dyslexia have been associated with specific reading retardation (with the exception of mixed handedness which is not a feature). It is generally argued that specific reading retardation is usually multi-factorially determined, while it is claimed that dyslexia is a unitary condition. All studies show that reading difficulties frequently run in families. This patient's mother herself is a poor speller. Rutter and Yule (1975) found that about a third of children had parents or sibs who had reading difficulties.

"Minimal brain dysfunction" is a constellation of clinical features including overactivity, inattention and conduct disorder, along with perceptual and learning problems not otherwise explicable by intellectual deficit (Shaffer, 1976). There may be a history of abnormal pregnancy or delivery, prematurity or asphyxia, and mild forms of brain damage suffered during the perinatal period lead to later development of psychiatric and learning problems. Hyperactivity is the most common characteristic. The child is active and shows lack of inhibition and of impulse control. He touches everything and speaks and acts compulsively: his behaviour is in other ways disruptive, in appropriate or antisocial. There are usually "soft" neurological signs, such as defects in coordination, dysdiadochokinesis, confusion of right and left and sometimes transient strabismus and mild somatic sensory defects. This patient had no evidence of any "soft" signs other than right-left confusion. However, as specific reading retardation is often thought of as a maturational lag (Thompson, 1973), it is possible that this patient had such difficulties earlier on, and these had already lessened or disappeared by the time he was seen. The fact that he used to be hyperactive but is no longer so, is an example of such maturational effects. The use of the term "minimal brain dysfunction" had engendered a great deal of criticisms as a result of the use of imprecise terminology such as "minimal" or "dysfunction"; in part because studies showed that allegedly pathognomic behaviours were largely independent of neurological dysfunction

and in part, because of politico-philosophical anxieties about "labelling" (Shaffer, 1976). In addition, Thompson (1973) objects to the term "minimal brain dysfunction" as it connotes brain pathology. The so-called "soft" signs often come from developmental lags rather than brain damage.

It is suggested that the development impairment in reading retardation may be due to a relative failure in the maturation of certain specific functions of the cerebral cortex or some neurological damage or a lack of suitable environmental stimulation or a combination of all three factors. Furthermore, it is suggested that these interact with school influences, temperamental features, including motivation and family circumstances. It appears that language impairment (due to either some biological factor or environmental privation) renders the child at risk and that whether he actually shows reading retardation will depend also on his personality characteristics, the nature of his home environment and the quality of his schooling (Rutter and Yule, 1973). In this patient, all three factors could be contributory. He may have developmental lag, questionable neurological damage and poor environmental stimulation. Underachievement may arise because of general impairment of a child's psychological functions. This most commonly happens in association with depressive disorders in childhood (Rutter and Yule, 1976). This patient lost his father when he was six, his cousin when he was seven and his grandfather when he was eight years old.

Depression in pre-pubertal children may present as emotional disorders such as school refusal, psychosomatic disorders such as stomach-aches, head-aches and giddiness and antisocial or conduct disorders such as stealing (Graham, 1974). A child's interest and involvement in learning may be increased by his association with the person (either teacher or parent) associated with learning process, so that he seeks to please him by his learning success (Rutter and Yule, 1976). After his father's death, there was no proper figure for this patient to identify with, as his mother was a poor student before herself. Being placed in the worst class at school, usually meant that the teachers were the least skilled. He had been punished by both his mother and teachers for poor academic performance before. Hence, learning comes to be associated in his mind with pain or unpleasant feeling. Eventually, he may come, by generalisation, to associate learning with punishments and so avoid it.

It is gratifying that patient's reading skills had improved so much after only two months of remedial education. It is felt that if he had continued further therapy, he could have progressed even more. With adequate remedial reading instruction, a large majority of children with reading disability attain sufficient ability to read for all practical purposes, although their spelling errors usually persist. In a follow-up study of twenty dyslexic boys, all of whom had attended a private school where they had received remedial reading instruction, it was found that all of them had gone on to college, and except for two, had gained degrees (Thompson, 1973).

SUMMARY

The concept of specific reading retardation was discussed, and compared with other terms used as synonymous with it viz. dyslexia and minimal brain dysfunction. It was suggested that specific reading retardation may be a more suitable term to use. The features of specific reading retardation, the evaluation of reading disability and management in terms of supportive psychotherapy, environmental manipulation and remedial education was described, using a case-report of a 13 - year old boy with such a disorder as an example.

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