READING RETARDATION IN CHILDREN

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A reading retardation exists when a child's reading age is behind that of his chronological age. Tests are available[1,2] that rate a child's reading capacity, these having been standardized against vast numbers of normal children.

INCIDENCE

It has been estimated that an average of 11 - 12% of all schoolchildren have some degree of reading retardation. A range from 5 to 30% has been discovered by workers in the USA and in Britain;[3] and a recent survey by the Transvaal Department of Education finds similar figures. Few studies have been made in South Africa, but there is no reason to believe that the figures should differ from those in other parts of the world. Translated into practical reality, the figures obtained for Johannesburg show that in its 191 schools (with a child population of 90,000) there are at least 10,000 children who have some degree of reading retardation.

CLASSIFICATION

According to the above definition, it is obvious that reading retardation is only a symptom. A similar situation exists with the terms 'juvenile delinquency' and 'mental defect'; which are also only outward manifestations of many conditions. One classifies reading retardation according to the child's capacity to learn to read.

Group I. Where the Capacity to Learn to Read is Intact

Here the child has a potential for reading, but this potential is hampered by some disorder: (*a*) Any strong emotion will hinder the process of learning, whether it be anxiety, hate or fear, etc., (*b*) inadequate facility to learn is occasionally seen, (*c*) inadequate teaching, (*d*) chronic ill-health in the form of conditions such as chronic heart disease, asthma, nephritis, etc., and (*e*) visual and auditory deficits.

In this section the retardation in reading ability is part of a general educational retardation, all subjects at school being affected.

Group II. Where the Capacity to Learn to Read is Impaired

This group involves brain dysfunction:

(*a*) *Brain damage* (including encephalitis, trauma, toxic conditions, vascular disease, etc.). Any damage to the brain areas which subserve receptive visual function. The result is a receptive visual aphasia (dyslexia or alexia). Neurological examination usually shows other manifestations of brain damage.

(*b*) *No obvious brain damage*. This is a dyslexia or alexia that exists without any obvious brain damage. It is felt that it is a constitutional defect and it goes under the name of 'specific reading disability' or 'primary reading retardation' or 'developmental dyslexia'.

In group II, the educational disability consists of a *reading disorder only*, the other subjects usually being spared. Later on, however, when reading becomes important for all subjects, they too are involved. The range of intelligence in this condition is the same as in the general population.

Signs and Symptoms

1. *Reading retardation*. The child will not pick up a book for the pleasure of reading. He reads in a jerky manner, as a Grade 1 child does. Letters and words are said aloud, as if the sound entering the ear gives a clue for recognition. The child has to concentrate hard in

order to read. He is unable to repeat what he has just read. He makes guesses or uses accompanying pictures as clues. He skips lines, as he is unable to keep the place with his eyes. He requires his finger on the word as he reads.

2. *Reading process disturbance.* (*i*) *Spatial disorientation*—the disposition and the shape of each letter conveys its meaning, so that the letter *C* is required to have its horns pointing to the right before it can be understood as a *C*. A dyslexic child has difficulty in this orientation and can well read ↄ or U or C as a *C*. He will confuse p, b, q, d; n and u, w and m, o and c, etc., and can read 'saw' for 'was', 'no' for 'on', etc.

(*ii*) *Temporal disorientation*—letters follow one another in time. In the word *CAT* the *C* is first and the *A* follows it to the right spatially and is also placed after it in time. The *T* follows on spatially and temporally. The dyslexic has difficulty in this sphere also.

(*iii*) *Blending ability*—the dyslexic may have the capacity to read each individual letter, but may find it a problem to blend them into a word. Or he may be able to blend 2 or 3 letters but have difficulty with longer words. For example he may be able to read *be* correctly, and *got* correctly, but not be able to blend them into *begot*.

3. *Broader conceptual defects.* Arithmetic may be involved. Not infrequently, however, the child with reading difficulty can do his arithmetic fairly well, especially in his head. Spelling is poor. Syntax is often disturbed, words being placed in the wrong place in the sentence. There may be disturbance in the child's ability to copy a diagram.

4. *Body image problems.* Some children have difficulty in distinguishing left from right, and a history may be obtained that in dressing he confused the left and right sleeve of his coat; or was unable to turn a jersey inside out in the correct manner. In laying a table he would confuse the placing of the knives and forks.

5. *Coordination problems.* His writing is usually bizarre and cramped, with blots and dirty books. He is not so adept with his hands as the average child. Occasionally he may show 'soft' neurological signs, as a decreased or increased reflex, or increased or decreased tone in a limb. One may often find a history of speech delay, the child learning to speak only after 18 months.

6. *Family history.* Frequently one obtains the story of left-handedness, or confused handedness, or of reading retardation in members of his family. It occurs in males 8 times more frequently than in females.

7. *Secondary psychological symptoms.* We have seen that emotional factors are important in the production of certain kinds of reading disability. However, any reading disability can result in secondary disturbance. The child who finds he cannot keep up with the class or with his parents' wishes, will become anxious; and after a period of vain endeavour will stop trying and become depressed. The problem soon spreads to his family members, with rows over homework, and arguments between parents about whom is to blame for the child's failure to succeed. A vicious circle is created, which at some time involves the teacher also.

RECOGNITION OF THE CONDITION

Both group I and group II show similar features that include reading retardation and reading process disturbance. Group I, however, is less obvious and tends to last a year or so, often responding quickly to the corrective methods that are usually tried in these problems. The child is taken to a doctor for a check-up and his physical state is rectified; the teacher is induced to apply extra time, or the parents receive advice concerning the emotional side of the problem.

Group II is much more resistant to these remedies, especially the severe dyslexias and alexias. One feels that any reading disorder that persists over the years and which includes the majority of the above signs and symptoms belongs to the condition called specific reading disability. There are, of course, grades of disability, the minor grades responding quite surprisingly to proper training by a trained remedial reading teacher.

PROGNOSIS

Prognosis is usually good in group I and the minor types of group II; there being an 80% improvement in the average level of reading. Group II has a poorer prognosis, especially the severe grades. This group is fortunately uncommon, comprising 10% of all reading retardation.

TREATMENT

Treatment involves:

1. *Remedial reading.* Mild grades are usually handled at school by the teacher. More severe problems need special remedial reading. This is done by specially-trained persons, who have made a study of reading difficulties. The period of special education for the child depends on the severity of the condition; in the more severe cases, however, it may be necessary to remove the child from school for a few months so that daily lessons can be given.

2. *Psychotherapy.* The kind of psychotherapy will depend on the severity of the psychological symptoms in the child. All cases need some guidance. The parents will be included in this counselling, as to the nature of the condition and the handling of the child. The teacher, who is unaware of the condition, will also need assistance in the understanding of the child with the special problem.

3. *Medication.* Occasionally the child will require some support by medicines. The very anxious child responds well to fluphenazine (Anatensol) or chlordiazepoxide (Librium) in the appropriate doses.

SUMMARY

Reading retardation in children is considered from the aspects of (*i*) where the capacity to learn to read is intact and (*ii*) where this capacity is impaired. A short description of symptoms and treatment is given.

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