Aphasia In Children

SUGGESTIONS FOR MANAGEMENT AND TRAINING

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Much has been accomplished during the past 25 years in the development of programmes for handicapped children. A major reason for these accomplishments is the cooperative efforts of parents, teachers, and other lay and professional groups. Those who have benefited most from these combined efforts include the deaf, blind, cerebral palsied, mentally retarded and the defective in speech. There is now another group requiring such consideration and cooperative efforts, the group of *children with aphasia.* This discusion is an attempt to outline some of the needs of aphasic children and to suggest ways for meeting these needs, especially in the home and in the school.

What is Language?

Before considering the problem of aphasia, it is necessary to analyze briefly the nature of language. Aphasia is a language disorder and we cannot understand the aphasic child's handicap unless we have knowledge of what language means for the normal child.

Language is a set of symbols used by human beings to represent objects, feelings and ideas. These symbols might be auditory (spoken word) or visual (written word and gestures). When the word *cat* is spoken, the speaker is using a sound (verbal symbol) to represent the actual cat. The person hearing the word *cat* spoken must know that the sound which he is hearing represents an actual cat and not, for example, a dog. Otherwise the process of communication breaks down. The same process and principle occurs in written language. Words have meaning and are symbols for something. The normal child gradually learns that the spoken sound for *cat* means a cat; he learns the same for all other words in his vocabulary. He first has an experience, such as playing with a cat; then he learns to associate the word *cat* with the object cat. After making this association he can use the *word* for the *object.* Consequently we say that language is a set of symbols which people use to represent objects, feelings and ideas. The aphasic child's problem is one of not being able to make such associations, or he makes them only partly and with much greater difficulty than does the normal child. Before discussing aphasia further, a brief consideration is given to how normal children learn this complex set of symbols called language.

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LANGUAGE DEVELOPMENT

Children are not born with language. One of the most important things they must do during the first two years of life is to learn a language. When we study the language which a child must learn, we divide it into three parts on the basis of the way in which the symbols (words) are used.

Language is used for thinking; that is, for talking to oneself. This is called *inner language.* It is used also for understanding what others say; that is, we must receive language from others. This is called *receptive language.* A third way in which language must be used is in making our ideas known to others; that is, we must use words to express ourselves and this is called *expressive language.* Dividing language into these three types, *inner, receptive* and *expressive,* helps us to understand how the child learns language and also what is wrong when a child has an aphasia.

Children must first have experiences, such as learning to recognize what is said to them before they can learn to speak. The child first develops some awareness of happenings, the meaning of experience. This is the beginning of his *inner language.* It takes the average normal child about eight to nine months to gain this necessary experience and inner language before he enters the next stage and begins to use *receptive language.* In other words, after eight or nine months he begins to understand a few words which are spoken by others. It takes him from four to five months more before he enters the third stage and begins to use *expressive language*; he is twelve to thirteen months of age before he speaks his first word. Often we assume that the child's first spoken word is his first language. Actually it seems that no child learns to speak unless he first has learned something about what his experiences mean (inner language) and secondly, he has learned to understand some of what is said to him. In more technical terms we say that language develops in three successive steps; inner language develops first, receptive language second and

expressive language third. This becomes of great importance in determining the type of aphasia in any particular child and also in giving him appropriate training.

A few comments should be made concerning other difficulties which might occur to delay or interfere with the development of language. Deafness interferes with the normal development of language, not because the child cannot associate the word with the object or experience, but because he cannot hear the spoken word. Another important problem which interferes with language development in some children is fear and apprehension. If the language (words) they hear is largely for scolding, punishment and threats, they might become so arfaid that they act as though they cannot hear, or at least as though they cannot speak. All children, including the normal, deaf and aphasic, will learn language more easily if it gives them feelings of enjoyment and pleasure rather than feelings of fear and rejection.

What is Aphasia?

Aphasia is a language disorder. The aphasic child cannot associate symbols (words) with his experiences. Such difficulty varies from one aphasic child to another. However, most of these children fall mainly into two general types; those who cannot understand what other say and those who cannot speak. According to the types of language discussed above, this means that some have difficulty in developing receptive language while others have difficulty in developing expressive language. Each of these will be considered separately because their problem and their needs are different. All aphasia is due to a disorder of the central nervous system. In medical terms it is referred to as a neurological disorder. Increasingly in the fields of Education, Psychology and Language Pathology it is being referred to as a psychoneurological learning disorder.

EXPRESSIVE APHASIA

The child who has *expressive aphasia* is unable to relate the words he hears to that part of the nervous system which is used in speaking. To use our familiar example, he hears and understands the word *cat* but because of deficiencies in certain nerve centres in the brain, he cannot *say* the word *cat*. Expressive aphasia sometimes is mistaken for a simple speech disorder. While talking obviously is affected by expressive aphasia, it is not a speech problem as such. Rather, it is normally a difficulty with language symbols. The child with speech difficulties can say words even though they might be poorly articulated. The expressive aphasic's difficulty is to get words out; usually when he does say a word, it is well articulated.

Often these children cannot say any words until after three or four years of age. With appropriate training many have considerable speech by five or six years of age . At first when they are successful in saying words, it is as though they blurt them out unexpectedly; they surprise themselves and their parents. A moment after they have spoken a word, they cannot repeat it. This sometimes annoys both parents and therapists because they assume that if the child says the word once, he can say it again. Actually this is not true. He cannot say the word again until the total circumstances are "just right". This might not occur for a few weeks or a few months because it is a combination of his activities, his interest and his nervous system. How to help him with these circumstances is discussed below under suggestions for training.

The expressive aphasic rarely is confused with a deaf child because he understands what is said to him. Occasionally he is confused with emotionally disturbed children because it is assumed that he can speak if he wants to. Parents sometimes feel that he is stubborn and make strong demands on him to speak. Such confusions are serious and add to the expressive aphasic's difficulties.

RECEPTIVE APHASIA

The child who has receptive aphasia cannot understand spoken language; he hears the word *cat* but he cannot associate it with a real cat. He cannot interpret the spoken language of others; he cannot "receive" what they are saying so his difficulty is called *receptive aphasia*. It must be remembered that his problem is not due to deafness; he can hear but he cannot understand what he hears. In receptive aphasia the impairment is limited to being unable to understand speech sounds. Other sounds, such as the cat's meow, the sound of the vacuum cleaner or the running of water, are understood. In rare instances it seems that a child might be able to hear but is unable to understand or to relate meaning to any sound. This condition is called *auditory agnosia*.

In thinking about receptive aphasia, just as with expressive aphasia, it is a disorder of language. The receptive aphasic can hear speech but he cannot understand it because certain nerve centres in the brain, which have to do with the understanding of spoken language, are not working properly.

Parents usually become aware that there is something wrong in the receptive aphasic child when he is between two or three years of age; some parents notice something different and seek advice when the child is between eighteen months and two years. They often wonder whether he is deaf because the receptive

aphasic responds to sounds inconsistently; at times he hears faint sounds and at other times he might appear to be quite hard of hearing. Other characteristics of these children are described below. It should be emphasized here that receptive aphasic children can be confused especially with children who have deafness as well as with the emotionally disturbed or the mentally retarded. Such confusions must be guarded against by teachers and specialists. Progress is being made in the development of ways to distinguish between children with receptive aphasia and those with other types of handicaps.

The receptive aphasic child is more affected and more disturbed than the child with expressive aphasia. We think this is mainly for two reasons. First, the receptive aphasic is disturbed in all types of language; inner, receptive and expressive. Because he cannot understand what is said to him, he has difficulty in organizing and in straightening out his daily experiences; that is, he is delayed in his development of inner language. In addition, when he cannot understand speech, he cannot learn to use it; he is delayed in talking. Remember that being able to comprehend spoken language is necessary in order to be able to learn to speak in the normal manner. The receptive aphasic is disturbed in all language areas while the expressive aphasic is disturbed mainly in one area, expressive language. This is important when we try to understand the receptive aphasic.

Some might say that the deaf child cannot understand spoken language either, so he and the receptive aphasic are alike. This is not true because there is an exceedingly important difference between the child who cannot hear speech and the one who can hear it but cannot understand it. The chief reason for this difference is that the conditions of aphasia and of deafness are so different. Deafness is due to deficiencies in the ear. While there might be similarities between deafness and receptive aphasia, it must be emphasized that *the differences are most important. It* is clear that the problems and needs of the receptive aphasic are widely different from those of the deaf child and therefore the training and home management of these two types of children also should be different.

Receptive aphasic children can be helped a great deal. Usually as they gradually learn to understand speech, they learn to use it expressively; that is, as they learn what words mean, they begin to talk. They make their best progress when the parents and language therapists work together. Parents can begin the home training programme as soon as they learn that their child is aphasic; special handling in the home is desirable immediately. Language training by a therapist often is begun by two to three years of age. It seems that for the best results this training should not be delayed beyond the age of three. With appropriate language training and home management many of these children develop understanding of speech by the age of five or six years. In many instances they enter the regular public schools but frequently are in need of special help, at least during the early grades.

Characteristics of Aphasic Children

In order to understand the aphasic child's needs more fully, it is helpful to analyze his behaviour. His actions tell us important things about his difficulties. The characteristics described below pertain mostly to children with receptive aphasia, but they also can be applied in some ways to those with expressive aphasia. *The expressive have fewer of these characteristics than the receptives.*

INATTENTION

Aphasic children are easily distracted. They cannot devote attention to books and play, or to other activities such as dressing and eating, as well as deaf and other children. They give their attention to anything that is before them, whether or not it is important to them at the time. They are very active and grab things a great deal.

The reason for their poor attention is that their difficulty prevents them from understanding their daily experiences and from separating the important from the unimportant. They are not being bad. They cannot control themselves well because they cannot grasp the true meaning of their surroundings and of their experiences. An important aspect of helping the child in the home and in the school is to be aware of this part of his problem.

PERSEVERATION

After the aphasic child begins an activity, he might have difficulty in stopping it. Sometimes he begins running and will run until he is very tired and loses control of himself. At such times he might laugh and giggle compulsively; this sometimes is thought of by parents and teachers as simple silliness. Actually, the child starts running and he cannot stop of his own volition, so he shows signs of overdoing it.

This same difficulty is seen in the child by his not being able to wait as a normal child. If you give him a crayon and a piece of paper and sit down with him as though you were going to show him what to draw, you will find that he cannot wait for you. He begins scribbling without being able to get the idea that he is to wait for you so that you can do it together.

This is shown in many other ways. Suppose that you can get him to understand that when Daddy comes home, you are going for a ride in the car. He might be pleased and happy for a few minutes; then he will become very excitable and want to go immediately. You say that you are not going until Daddy comes, but this does not help. He becomes more and more disturbed and demanding. In some children this problem becomes severe. Again, they are not being bad. Rather, they cannot tolerate having things on their mind and waiting until the logical time to go ahead with them. We call this not being able to wait. Only through patient management and training do they learn to keep an "idea" in its place until the right time to carry it out.

HEARING

Parents of receptive aphasic children often state that at times their child seems to be able to hear while at other times he does not. It is not that these children cannot hear. *They can hear but they have trouble in listening.* This is like the trouble they have in paying attention. To be able to listen means that they can pay attention to one sound, such as to what their parents are saying, and not be disturbed by other sounds around them. This is especially difficult for the receptive aphasic. While his parents are calling him, he might be giving his attention to the sound of a car in the distance and therefore ignore the call of his parents. Hearing and listening are not the same. Listening is the use of hearing. Disturbances of listening are common in these children.

OTHER CHARACTERISTICS

As we work with these children, many other characteristics are becoming known. It is not possible to discuss them in detail here but several will be mentioned. Aphasic children often are awkward and clumsy in walking and in using their hands; they hold a pencil or button their clothes awkwardly. They are not shy like deaf or normal children; they make little distinction between strangers and friends.

This is referred to as a *disturbance of social perception.* They are slow in developing control of their toilet habits. This too is different from deaf and normal children. Apparently it takes the aphasic child longer to learn than certain feelings inside of him mean that it is time to tell mother that he should go to the toilet. Confusion, misunderstanding and bewilderment are common. We can appreciate why this is true when we remember that many aphasic children at first do not understand gestures well either; they must guess most of the time as to what is expected of them. Sometimes they guess wrongly, as did the little girl who was helping her mother clean. The mother said that she should empty the waste basket in the box on the porch. She had quite a surprise when she saw her daughter emptying the garbage into the box instead.

Perhaps this discussion of a few of the characteristics of aphasic children will be helpful in clarifying their problem and in indicating how they need help both in the home and in the school.

What Causes Aphasia?

Aphasia can result from many different causes. Only a few can be mentioned. Causes are of three types: (1) Diseases, such as meningitis during infancy or German measles in the mother during pregnancy, might damage brain tissues and cause aphasia. (2) Injuries occuring during delivery might cause minor brain hemorrhages or anoxia (lack of oxygen) and result in aphasia. (3) A defect in the development of certain brain tissues also might occur and cause an aphasia.

It is interesting that at present it seems that receptive aphasia develops most frequently from the first two types of causes given here and that expressive aphasia develops most frequently from the last type.

Suggestions for Management and Training

There are many important ways in which parents can help their child to develop language. A few suggestions for home training are given below.

OVERSTIMULATION

One of the aphasic child's greatest difficulties is his inability to tolerate normal stimulation. When he is confronted with the typical rushing about — television, toys, dressing, eating, visitors, going to the store and many other happenings in the home — he becomes over-stimulated. He cannot integrate and understand all of these experiences so he becomes distracted, bewildered, confused. This is not because he is mentally retarded, but because his mind does not get all the experiences to get together and make sense as easily as do other children. Therefore, he should not be exposed to happenings which are beyond his ability to handle. For example, many parents have said that their child becomes uncontrollable at the super market. Just think of the tremendous stimulation he is receiving in such a store. There are thousands of objects and colours, many people, and perhaps the child has to ride in an unfamiliar grocery cart, etc. The average child enjoys this stimulation and experience while to the aphasic it can be overwhelming. Other common experiences which often

overstimulate these children, are going to a restuarant or being required to be present with guests in the home.

There are many other such situations. It is necessary for the language therapist to help the parents learn to notice when their child is being overstimulated. When this occurs, it is wise to take him out of the situation and give him assurance in a calm, deliberate and patient manner. After being out of the happenings and being "protected" from them for a few minutes, often he is ready to come back to the activity.

LISTENING

Receptive aphasic children especially are in need of help in learning how to give attention to sounds which are important. This is done by playing games which depend upon listening. Toys which produce sounds, such as quacking duck or a growling bear, can be used. The parent and the child each should have the same kind of toy. To begin, you make the sound in full view of the child and he gradually learns to imitate it with his toy. The next step is for you to hold your toy behind your back and have the child imitate the sound. The third step is for you to hide and then make the sound; the child is to find you after he has *listened* for the sound. As he learns the game, he hides and you find him. The entire activity should be playful; not boisterous, demanding, or overstimulating. Use one sound at a time. When the child is successful with one, go on to others. Talk to him in single words while playing these games with him. The reason we do not begin by having the child listen to spoken words instead of to toy sounds is that usually he is not ready to listen for words until he has learned to listen for other (nonverbal) sounds.

ROUTINES FOR EATING

The circumstances centred around eating, frequently are difficult for the aphasic child. He must be able to conform to the demands of the family and also to understand the varying routines for feeding himself. At times he is to use a spoon, then a fork; he is to understand which foods are eaten in what way. To help him at such times, it is wise to have him seated next to the same person from meal to meal. With some children who are highly distractible, it is helpful to have them eat before or after the rest of the family so that the stimulation is less. Some parents have found it helpful to give the child an appropriate plate, a spoon or a fork and put only one food on the plate at a time. This makes it easier for him than when he has his milk, several foods and a spoon, knife and fork before him from which to choose.

TOILET TRAINING

Aphasic children require more time than other children to learn toilet habits. Usually they are not ready to begin such training until they have been helped with their distraction and until they have understanding of their daily experiences; that is, until inner language has begun to develop. When training is begun it should be done with patience and with consideration of the child's problem. This is difficult, as it was for the parents whose aphasic child was five years of age before he was trained successfully. We know that this child had good abilities so we assisted the parents with his problem for three years. He is now seven years of age and is doing well in public school. The training should consist of good timing, it should be consistent and it should be simple in demonstration. If no success is achieved in a few weeks, it is wise to stop all attempts for a week or two then start the training programme again.

LANGUAGE

Encourage language but *do not demand speech.* It is understandable why parents are greatly distressed when their child does not begin to talk at the expected age. However, demands that he say words for what he wants or any other demands that he talk, usually make the child's problem more difficult and may even further delay his beginning to talk. Whenever he uses his voice for calling you or for indicating what he wants, you should accept it as though he were talking even though the sounds are nothing like real words.

The sooner the child can use his voice for expressing ideas, no matter how simple, the sooner he will develop language and speech. For example, a child of three who had a severe aphasia, when shown a doll's dining room table, said "namnam". She was able to use a number of such sounds for daily experiences. When sounds like these are used, they should be understood by you and you might say. "Yes, Janie eat." Encourage the child to try to understand and to express himself in any way that he can, including the use of gestures. Such encouragement helps him to prepare for and to develop more normal language.

PLAY

Most toys are made for children who have normal language and thus can use imagination and ideas in a normal way. Many aphasic children get no enjoyment from a fire truck with a siren. They have not been able to make any association between a toy and the exciting experience of seeing the real fire truck pass. To make this association requires language and

a degree of imagination which they do not have at the usual age.

To help your child learn to play, use toys which represent daily life — a toy car for daddy's car, a toy chair and table for the one he uses, a toy bath tub, some small figures to represent members of the family, a toy dog for the dog next door, a toy bed for his bed etc. As he associates these toys with his daily experiences, he will gradually learn to use them in playing games, such as "Daddy comes home." "Johnnie goes to bed" and "Mary helps Mommy clean." From these games you can go on to more imaginative and abstract play. Development of the ability to "pretend" is very important because it is the basis of inner language; the child will not understand or use speech until inner language has begun to appear.

DISCIPLINE

Use patient firmness, not punishment. The usual methods of discipline are ineffective with aphasic children. This is because of the way in which they differ from other children in their needs and understanding. The discipline in most homes is based on the child's being able to understand that what he has done is not what was expected of him and the punishment is to make him realize that he is not to do it again. You see that typical discipline assumes that the child makes associations and used ideas well. If this type of discipline is used with aphasic children, they might become more distracted, more excitable and more difficult to manage.

Many parents have found the method of "firmness, without anger" helpful in managing their child. This means that definite *yes* or *not* lines are used and adhered to consistently from day to day; *no* is said firmly but not in anger. As a matter of fact, we find that we can say *no* firmly and then smile and get good results. Apparently anger adds to his feelings of bewilderment and confusion. He learns to abide by the *no* more easily when he is not confused or threatened by anger.

LANGUAGE THERAPY

Language training by professionally trained therapists is necessary for the best welfare of the aphasic child. More therapists trained especially in the techniques of language development are needed to meet this need. A few of the principles and proceedures which have been found beneficial will be described briefly. Most of these suggestions assume that the therapist is working with only a few children at a time. Some of the suggestions given above, in addition to those given below, are considered applicable to classroom situations after the child has entered a regular school.

THE TRAINING ROOM

The most suitable training room is one which is small, highly uncluttered and simply decorated. Toys, materials and figures on the wall may serve as distracting influences.

CONTROL PROXIMITY

If the child is near you, he attends longer and controls his distraction. Only after training can he engage himself successfully in the distance. Your presence helps him assimilate experience and to integrate it meaningfully. Gradually you can increase the distance between yourself and the child.

THE USE OF MATERIALS

The use of concrete objejcts is desirable as compared to the use of pictorial materials. These objects should represent the child's daily life; they have the added advantage of permitting him to handle and to feel them. This simplifies the perceptual task. When pictures are used they should be simple and easily distinguished from the background. Many children's books present a difficult perceptual task because the figure is presented against a field, a cloud, a sunset, etc. A strongly outlined drawing with a plain background is more useful, especially in early training. The use of concrete objects has another distinct advantage in that the child can manipulate them when expressing ideas.

THE LANGUAGE DEVELOPMENT APPROACH

The teacher and therapist should be aware of the child's total needs and pursue language training only at the level of his tolerance for stimulation and success. The training should be based on the child's major language problem. *Children having receptive aphasia usually require assistance mainly with inner and receptive language, whereas those having expressive aphasia need training only with expressive language. In all such language training the therapist should be aware that although articulation involvements might be present, the basic disorder is not a speech defect. Correction of articulation should be deferred until language usage has met practical communication needs in daily life.*

A method which has proved useful for the development of language will be outlined briefly. For maximum results with this procedure, it is necessary to acquire some knowledge of the psychology of language, language pathology, and of educational methods used with young children, as well as training

and experience in the area of psychoneurology. The references given below are sources which provide an opportunity for background reading.

The basic principle on which this method is based includes the assumption that the child must first have a meaningful experience and then relate or associate the symbol with it. Therefore, in an organized manner, determined by the child's performance level, he is engaged in an activity. The activity is chosen from concrete experience. For example, doll figures representing the father, mother and child together with appropriate toy beds, a table and chairs, are presented to the child. These toys are presented one, two or three times at a time depending on the child's capacities. He is encouraged to relate the toys meaningfully; to place the father at the table, the baby in the bed, etc. This level of the activity reveals the child's capacities in inner language. Some children require considerable training at this level because even their concrete daily experiences have not become logical. Usually inner language is sufficiently developed so that he is *ready* to begin with receptive language when the parents bring him for training.

In receptive language training the child is engaged in an activity as indicated above, and the therapist first gives him the symbol for objects he is using. This is referred to as the *naming level*; the child is given the names of the objects one at a time. For example, if he is engaged in putting the daddy figure in the bed, then the words *daddy* and *bed* would be given. *Timing is important.* The symbol must be exactly appropriate to the act and the object at the time the child is performing it. After names of objects have been achieved, more complex language is introduced, such as "give the baby a ride" and "wash Mary's hands". Such directions should be given only when they can be done as part of the total play activity in which the child is engaged. During training on inner and receptive language, no demands are made to use expressive language (speech).

After inner and receptive language have reached a level of practical usage, a third step — training in expressive language — is begun. Children with basic problems of receptive aphasia, without a significant expressive involvement, begin using expressive language as soon as inner and receptive language have developed sufficiently. Much emphasis on expressive language usually is unnecessary. Thus training in expresive language is only for the expressive aphasics. The same principle as described above is used. The child is engaged in an activity and as he used a toy object, such as a car, the therapist asks, "What is that?" This question should be a sincere request for information, not a demand. Whatever utterance is given is accepted completely without correction. This naming of objects continued until some useful words or approximations have been achieved; the important factor is that the child's utterances become useful for communication rather than for perfection of articulation. The therapist then goes on to more complex language; as the child puts the toy dog in the car, she says, "Where is the dog going?" The child can now reply by saying 'bye-bye" or by using the phrases "go to the store," "for a ride", etc.

The Aphasic Child's Future

Parents and therapists frequently ask, "What shall we expect from the aphasic child?" Althoug specialized professional therapy for the aphasic child has only just begun, it is apparent that he has a good future. When parents learn more about his needs, when more therapists have been trained, when preschool and school age programmes have been developed, his future will be bright. Such developments are forthcoming through the combined efforts of parents, teachers, psychologists, pediatricians, psychiatrists, neurologists, language pathologists, speech pathologists, audiologists and others. The aphasic child's problem is complex and difficult. This discussion has been an attempt to outline ways in which you can meet the challenge he presents.

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