SPEECH-LANGUAGE THERAPY BASED ON BEHAVIORIST PERSPECTIVE IN PERVASIVE DEVELOPMENT DISORDER: CASE REPORT

Intervenção fonoaudiologica baseada na perspectiva comportamental em transtorno global do desenvolvimento (TGD): relato de caso

Ana Paola Nicolielo [1], Bianca Rodrigues Lopes Gonçalves [2], Jordana Montenegro Prado Arruda [3], Simone Aparecida Lopes-Herrera [4]

ABSTRACT

The aim of this study was to describe a process of speech-language therapy focused on the adequacy of language skills, cognitive and social abilities with child with a language disorder as part of a Pervasive Developmental Disorder (PDD) under the behavioral approach. The child in question was female and was diagnosed in a Clinic of Speech-Language Pathology in a university and referred to the neurological diagnosis at 2 years of age. Soon after the diagnosis, the individual language intervention begin based on a behaviorist perspective of more traditional base; however, throughout the process, being reported here the first two years of intervention and presented data from the revaluation speech-language at the beginning of the third year of intervention. As a result of the intervention, there was improvement in receptive and expressive language, and the child presented evolution as the behavioral aspect and the acquisition of communicative skills, involving verbal responses to actions. Additionally, increased eye contact and attention span and aspects related to the symbolism.
The case was described with a concern to make it clear that it is not always easy to identify the best therapeutic approach for these children early in the process, and decisions about the appropriate approach should be constantly rethought not only because on the diagnosis itself but also the manifestations of general and specific symptoms – which vary according to children´s development and progress of the intervention. These decisions should be guide by the experience of the professional, but also in the expectation and limit of each family.

KEYWORDS: Speech, Language and Hearing Sciences; Autistic Disorder; Child Language; Child Development; Intervention Studies; Treatment Outcome

INTRODUCTION

Many scenarios can affect children's development on its early years of life, causing significant damage in several developmental areas and affecting the individual through its entire life[1]. Those who qualify by a remarkably altered development in three areas, involving social interaction, communication and the presence of a restrict repertory of activities and interests, are known as Global Developmental Delays (GDD)[2]. Such delays are marked by an early start of developmental detours and lateness, whose clinical picture tends to be complex and variable, being that the symptoms depend on the gravity of the case, on the developmental stage of the child and on the existence or not of other associated mental disorders, creating a spectrum or continuum which varies from mild to harsh symptoms[3].

(1) Speech-Therapy Clinic in Bauru Dental School at the University of São Paulo, Bauru, SP, Brazil.

(2) Bauru Dental School at the University of São Paulo – FOB/USP, Bauru, SP, Brazil.

(3) Engemed Company in São Paulo, São Paul, SP, Brazil.

(4) Department of Speech-Therapy at FOB/USP, Professor at the Speech-Therapy Graduation and Post-Graduation Courses at FOB/USP, Bauru, SP, Brazil.

This work was done at the Speech-Pathology Clinic in Bauru Dental School at the University of São Paulo.

Conflict of interest: non-existent

The language alterations are systematically found in the different pictures which compose the said spectrum, being noticed huge qualitative and quantitative variety in the range of communicative behavior in such population[2]. Language always represents a fundamental aspect being connected to the prognosis of these cases[4,5].

In such cases, damage can be found on social interaction, evident by the inability to relate to others, being that the most peculiar characteristic which is usually combined with language deficit and behavior alterations that characterize in general the autistic spectrum. However, these alterations don't reach all of the developmental areas at the same proportion, being the cause of widespread damage[6]. The diagnosis is fundamentally clinical, not being known up to this moment any biological marker to categorize the alterations classified between the global developmental delays[7].

A huge variety of theoretical background is mentioned when it comes to therapeutic approach in cases of GDD, starting from distinct assumptions. However, even though the strategies and approaches being many, the final intended goals in the whole interventional processes are the same – to improve the linguistic, social and cognitive skills of the individual. On the other hand, there is nothing to prevent the existence of functional principles guiding a behavior ground work, as long as it is understood that every worked behavior should have a functionality within the child and it's family's context and environment.

Basically, as forms of intervention, the formal and the functional approaches can be counted. In the traditional models of therapeutic intervention on language – also known as formal – the goals of the intervention are focused individually on the dimensions of the language and in the psycholinguistic processes involved with such dimensions. The goals are chosen and guided by a speech-language therapist that elects the aspect to be worked on, building previously the strategies to be utilized to reach the proposed goal, specifying beforehand the responses to be expected from the child. By contrast, the functional intervention models, with grounds on a pragmatic view, have as a first goal to make the children communicate efficiently, no matter the communication means to be utilized or about deviations on the expressed linguistic form. The needs of the child are what guide the goals of the session and, through them, the speech-language therapist organizes the language dimensions, being those expressed all at the same time[8].

To be noted is that children with GDD show a remarkable ability to regulate other people's behavior to satisfy a need connected to the environment regulation; however, there's a deficit on its ability to attract the focus of the adult to itself or to an object, having the interaction as a goal. The focus on guiding the improvement of communication should be the development of functional communication skills. A work towards the interests of the child will grant an increase on intentional communicative behaviors and their functions on more natural ways[9].

However, this previously highlighted work allied to a behaviorist approach, and based in principles of Applied Behavior Analysis can be of great help to the therapeutic success, in which undesired behaviors such as stereotypies and lack of attention span, can be eliminated or diminished in its manifestation frequency and desirable behaviors, for example the communicative intent, can be reinforced and shaped by means of specific strategies[7].

Taking into consideration the highlighted spots, this present case study has its goals in describing the speech-language pathology intervention process of a child with autism diagnostic, being that the intervention was made under a behaviorist overview. To be highlighted that, at the beginning of the intervention, a more traditional behaviorist focus was adopted, however, along the process a more functional focus came to be used, being this the focus of the case study here presented.

CASE STUDY PRESENTATION

This study was approved by the Ethics in Human Beings Research Committee in FOB/USP (Process No. 187/2011). The parents have signed the Term of Free Consent, consenting by it, with the realization and divulging of this case study and its results. The study was made by means of the analysis of the data existent in the reports that are found in the medical records of the referred child.

The subject is a female child, 6 years old at the time of the description of the case, diagnosed with a Language Delay as part of a Global Developmental Delay.

The child started her medical treatment in the Speech- Language Pathology Clinic of her original institution when she was two years and seven months old, being subjected to speech-language pathology evaluation. In this occasion, both the anamnesis and speech-language pathology evaluation were made. Data from the medical records revealed that the mother made use of anti-depressants starting from the 4th month of pregnancy, being this drug prescribed by her medical doctor. The birth happened without any occurrences. Data from the first childhood reveal that the mother breastfed the child for 40 days and then quit breastfeeding because of anti-depressant use. The child

presented recurring cases of otitis, being subject of drug treatment, drug whose name the mother could not specify. There is no record of neuro-psychomotor delay.

Oral language related, the emission of the child's first words happened when she was one year old and when she was about 1 year and 8 months the child started combining two words to form small sentences. By two years old, the mother says that the child started being unfocused, and it seemed that she could not hear and did not possess focus. She stopped talking, stopped showing interest for toys, and would not comply with orders. Started communicating by means of gestures and to use other people as tools to accomplish the activities she desired. She did not present oral language, only babblings which she used in random ways. The mother reports that the child had difficulties perceiving real danger and demonstrated grave stress when her routine was modified, demonstrating difficulties to adapt when such changes occurred.

The speech-language pathology evaluate before the start of the intervention was done basically by means of the ELM Scale[10], of the Portage Operation Inventory[11], of the Gesell & Amatruda's Behavioral Development Scale[12]. The findings hinted on developmental delays in all of the observed areas (language, motor, cognition, self-care and socialization). It is a highlight that, in several moments during the evaluation the child used the evaluator or the mother as a tool to accomplish the desired activities. The hearing test resulted in inside-normalcy standards, being made the tympanometry and the behavioral audiometry, since the child would not allow the use of headsets for the pure tone audiometry.

The speech-language pathology diagnosis was of language delay indicating a global developmental delay (GDD). As procedure, after the speech-language pathology evaluation, the child was sent to individual speech-language pathology therapy, twice a week, in the original institution's own Speech-Language Pathology clinic and to a specialized care on special children service, which the child's family did not want to use before the definition of the medical diagnosis. The child was also sent to the children's neurologist for diagnosis closure, being the doctor to confirm the GDD diagnosis, asking for supervision on the case after the start of the intervention, to better define the GDD category in which the child would fit, having as a base the monitoring of the case's evolution.

Basically, the main goal of the speech-language pathology intervention process, initially, focused the adaptation of the language, social and cognitive skills of the child. The specific goals worked for in the first year of intervention involved the work to increase the attention span, eye contact, communicative intent and oral language stimulation, being such aspects worked on by means of recreational-pedagogical activities. At this moment, a more grounded behavioral point-of-view was approached (Applied Behavior Analysis), with use of conditioning principles of positive reinforcement to the target-behaviors set by the therapist. The starting target-behaviors were establishing eye-contact, remaining in the therapy room, recognizing the others and establishing joint attention. Behaviors seen as inadequate, such as tantrums, use of the adults as tools or stereotypies – when presented – were ignored by the therapist and the parents were oriented to do the same, for such behaviors not to be reinforced. By the start of the intervention process, it was possible to observe that the child presented repetitive behaviors playing in the same way with the same object for a prolonged period of time, showing resistance to a change of toy or activity proposed by the speech-language therapist. Most times, during the sessions, the child made use of the instrumental function, requiring objects by means of gestures, making little eye contact. She made few vocalizations, being these made isolated and without intonation. In regards to the behavior aspect, she would not stay in the therapy room without her parents' presence and when not comprehended or reprehended, because of inadequate behavior, she presented behavior of tantrums and screaming.

It was necessary the realization of a constant guiding work with the family, seen as the parents were very resistant to do the speech-language therapist's request and let themselves to be used by the child as tools for the accomplishment of the actions desired by her. Beyond that, they showed difficulties to establish a daily routine with the child, something that was also not presented by the whole family. Being that, the orientations included the importance of the stimulation of adequate oral language, the establishment of a daily routine of activities and to control the environmental stimulus. To be highlighted that the child had a lot of difficulty to adapt to the school environment. Many times, the parents reported that the child presented aggressive behavior, refusing to enter the school. The teachers reported to the parents that the child remained some time isolated from her classmates, but, little by little, accomplished some of the proposed activities (recreational-pedagogical activities), however, without much interaction with the other children. In face of this behavior, the parents moved the kid to another school, which possessed a stimulation room for children with special needs.

On the subject of her evolution in her first year of speech-language pathology intervention, it was reported an improvement in regards to the behavioral aspect, seen as the child was already entering and remaining in the therapy room by herself, no longer requiring the presence of her parents. Beyond that, the tantrum behaviors facing and undesirable situation diminished. As for her communicative skills, referring to the dialogic or conversational skills, the child started to present communicative intent, searching, at some moments, interaction with the speech-language therapist. However, the vocal or verbal responses to the counterpart, as well as active participation in the dialogical activities were still absent. Related to the communicative skills, there was an increase in the occurrence of the instrumental function, but, with no improvements about the oral skills, being this function accomplished, still, by means of gesture. The other functions remain absent. Referring to the means of communication, the child utilized non-articulated vocalizations and articulated with intonation on the language, non-symbolic gestures, like grabbing a hand and taking it to the object, and, as for verbal means, it was possible to see only some onomatopoeias which referred to animals.

During the interaction in therapy, it was seen increase in eye-contact and a bigger interest in the proposed activities, presenting improvement towards attention. In regards to comprehension skills, she rarely shown comprehension to the speech-language therapist's requests, those requests made by verbal or gesture commands, presenting non-systematic responses. During object and toy manipulation, the child presented repetitive behavior, seen that she played in the same way with the same toy for a prolonged period of time, evidencing conventional use of only some objects. She manipulated the objects without any organization, giving up on the activity at some points and, in many others, using the speech-language therapist as a mean to surpass some obstacle or difficulty during the activities being done. About the symbolic child-play, it was still in its sensory-motor stage. Inside of therapy, the child has shown to be resistant to switching toys or activities. Such fact also occurred in her daily life as reported by her parents. Due to low response of the child in developing a functional verbal communication and being that the expectation of the family, it was indicated to her a treatment with alternative communication, which the family refused, even if the support of a specialized institution in the city who offered the serviced was also granted. In this way, it was given resume to the speech-language pathology intervention, but with some rerouting.

Therefore, in the second intervention year, it was made a rerouting of the case, with an intervention proposal still behavioral, but with a more functional character – that is to say – although the intervention would be changed to a more functional character, it would still utilize behavioral ground principles for the control of behavior and directing of the child's attention. So, the focus are behaviors which have a functionality in the child's context and environment, being that the intervention starts to be more planned according to the child's interest. Even though the intervention was facing the child's interest, it had as direct goal the increase in frequency of intentional communicative behavior and its functions in a more natural way. The rerouting was done, therefore, considering the perspective of adding value to the linguistic and communicative interchanges and understanding the language as having, beyond the symbolic function, a social and a communication function. As such, the main therapeutic goal was to develop a comprehension of the communication situations and its intent, by means of use of the non-verbal and verbal communicative skills, aiming an improvement on social, school and family insertion of the child. The specific goals were development of joint-attention, eye-contact, imitating capacities, symbolic activity, and the establishment of interactional turns and functionality attribution to objects and communicative situations.

The development of the therapeutic strategies considered the utilization of facilitating inputs for the linguistic development. The contingency of speech-language, which is the ability to respond to the child's behavior, being it on the verbal modality or not, continuing the child's topic of interest, started to be utilized in the therapy, offering for more participation of the child in the dialogic activity. Activities were proposed involving joint-attention, having as goal for the child to focus on the other's speech and in acting in a shared way in communicative contexts.

During the recreational-pedagogic activities, situations were created which could make the child pay attention to the verbal instructions, for her to stop the manipulation of the objects which she would persist to explore in a non-functional way and direct her attention to the speech-language therapist and/or the proposed activity. Being highlighted here the importance, considered within the functional approach, of the child's relationship with the adults for the development of her linguistic skills, having both contribute with their own experiences and knowledge to the interaction. Allied to this strategy, even strategies of behavioral ground approach were utilized to give positive and differential reinforcement of stimulus, in which only the behaviors considered suitable by the speech-language therapist were

reinforced, such as, directing focus to what was requested and making verbal emissions; the reinforcements were given by means of offering an object that was of interest to the child, motivating sentences and words, being that the other behaviors, such as, not directing the attention to others, were ignored by the speech-language therapist, that once again started the planned verbal interaction. Thus by means of use of this strategy, the desired behaviors had an increase in frequency in opposition to behaviors different from the desirable, occurring decrease in the variability of the topography (way) of responses (behavior) reinforced[9].

To direct the attention and obtain suitable attention-related behaviors, the therapeutic environment had to be rearranged, excluding dispersing and competing stimulus, being it now composed by the presence of the child, the speech-language therapist and only one object previously selected for interaction. The proposed activities set out to arouse the interest of the child, motivating her to participate in communicative interchange.

The speech-language therapist started to monitor and analyze the behaviors presented by the child, as to check which attitudes were facilitating for the development of the communicative skills, proposing recreational-pedagogic activities which created situations, as natural as possible, for the execution of the dialogic activities. The child's curiosity was always instigated by everything that was new. An example activity which was done was when the speech-language therapist offered the child a pot closed with a lid, telling her that inside this pot there was a toy, and after this information the pot was delivered to the child for her to open it. As such, the object of desire remained out of the child's reach. During these activities, the child started to direct more her focus and started to search for interaction with the speech-language therapist so she could get help in the task at hand. When she could not accomplish the proposed task (open the pot to reach the object), the speech-language therapist would offer a model to the child and she would watch it carefully, to reproduce soon after, using a strategy called modeling. The modeling technique is a behavioral procedure in which consecutive responding approaches on the individual to the expected behavior are done, seeking the widening the behavioral repertory with the acquisition of new responses[9].

At each session, when the child was able to execute the proposed activities, their level of complexity was increased. After being able to achieve the desired object (hidden toy, for example), it was proposed a new interaction between the child and the speech-language therapist, in a way to act on the same toy in an interactive and more diversified way, being worked the symbolic activity and the functional exploration in question in a combined way. For the child to not execute the activity in an isolated way without the participation of the speech-language therapist or without the use of the proposed object, which would not provide interaction and experience exchange, it was requested the attention of the child in a systematic and directed way. On the grounds of the Applied Behavior Analysis, which was mentioned before, the child was compensated by means of positive social reinforcements (such as smiles, clapping hands, and incentive words with varying intonation) every time that she accomplished the proposed activities or when she demonstrated desirable behavior, making the interaction situation pleasant and gratifying.

RESULTS

The child has shown evolution in regards to increasing the attention span, to a point when it was possible to accomplish the proposed activities with more than one object or toy in the room. The environmental rearranging was no longer necessary, i.e. excluding from the therapy room stimulus that, initially, would be considered competitive, such as other toys, furniture and décor objects.

After achieving evolution in establishing joint-attention, it was possible to insert the standard procedure directed to the child, also utilized in therapeutic sessions. Such procedure utilized the behavioral imitation technique, in which the speech-language therapist, in possession of the desired object, would show the verbal model referring to it, and would also execute emissions to represent the communicative actions or gestures, so the child could associate the oral/verbal emissions with the objects and actions which were represented. It was sought, then, the stimulation of the oral language comprehension and the development of the capacity to abstract and symbolize the verbal linguistic code, as well as the imitation of speech-language therapist's oral productions. Initially, the child did not show response, that is, she did not imitate the oral productions. In such occasions, the object in question was provided to the child after the third unresponsive attempt, in a way to provide the experience of it, being repeated afterwards the name of the object in several occasions.

The waiting technique was also utilized, in which were made pauses/silences in respect to turn switches, being that associated to behavioral procedures, during the interactions. Thereby, the speech- language therapist would always wait the

child's response so that her communicative intentions could have the opportunity to appear more often[9].

The child started to present more verbal responses, seeing that she started to imitate some onomatopoeias and communicative gestures associated with the emission of jargon. Along the entire interaction, the speech-language therapist required a response from the child, so as to make the child develop the skill to provided information when requested. When the child could not provide such information, the speech-language therapist offered a suitable model with the goal to make the child start to follow instructions and models and to make her able in her language development process. At each response from the child, the speech-language therapist used the modeling technique, making consecutive approaches of this response to the final or expected behavior, being this behavior previously established (e.g. the name of the object). The child started to produce some isolated syllables, in reference to some objects, for example, she emitted the syllable */bא/* referring to */bאla/* (ball). Some verbal productions were also associated to actions, such as the emission of */ʃa/* requesting for the */ʃave/* (key), in order to open the locker in which the toys were stored, making use, then, of the instrumental function by means of utilization of verbal emission, which was not demonstrated previously. She also started to identify figures for action, representing them by means of gestures such as washing hands, taking showers and eating, making oral emissions to represent them, such as the sound /ʃ/ to wash hands and take showers and "*hmmm*" ("yummi") to eat.

It could be noted evolution among the communicative functions, whose presence was not seen previously, such as the protest function, being this associated to a verbal emission, in which the child would make a "no" gesture with her head and emit /*nãna*/ (nono) when she did not want to do any proposed activity; of the interactive function by means of gestures such as a hand gesture for "hi" and "bye", the naming functions, naming some animals by means of onomatopoeias. She started to use the heuristic function, by means of gesture, when she questioned herself where the desired toy was (a "where" gesture with her hands). Beyond that, the child started to present an increase on the communicative function, the child more often became the starter of the interactions and to present responses to her counterpart, waiting for her turn in a suitable way. The increases on functionality as well as communicative intent have occurred in response to the rerouting to a more functional approach. This observation was made on the intent to help speech-language therapists make adaptations to their strategies, even when utilizing behavioral resources, so that they could be adapted to more functional goals, without loss on the focus characteristic of the original intervention.

During the intervention process, it could be seen improvement on the receptive language, seen as the child would start to present a level of oral language comprehension not previously seen due to absence of responses. The child started to comprehend situational orders composed of up to three actions, without gestures. She has shown to comprehend what was required of her, providing responses by means of gestures and some oral emissions.

Together with the evolution of her communicative skills, there was evolution on the symbolic conducts, presented on a higher frequency by the child, who started to use symbolic schemes to require or obtain some object out of her reach, emissions with symbolic meaning and representation, like playing of giving showers to a doll.

The guiding work to the parents also had positive effect, seen that they started to do the proposed activities at home, being able to enjoy at the best possible way the moments of natural and spontaneous interaction to stimulate the language. They started to show more concern with the right way to stimulate the language development, becoming active participants on the proposed interaction. The parents started watching and interpreting and to responding to the different forms of communication provided by the child, being able to comprehend what she meant to say, starting to respect the communicative turns. Along the whole intervention process, the child showed a good generalization capacity towards the therapeutic goals. The observations done along the therapeutic process determined evolution of the child's responses towards the pragmatic approach utilized, evidenced by the increase on functionality and communicative intent, not previously seen.

The reevaluation data here presented are from the beginning of the third year of intervention and this was done, mostly, by behavioral observation, using the *Protocolo de Observação Comportamental*- PROC[13] (Behavioral Observation Protocol), development evaluation by means of the Peabody Picture Vocabulary Test –- PPVT[11], development evaluation by means of applying the Gesell & Amatruda's Behavioral Development Scale[12] and the Portage Operation Inventory[11]. This last one has revealed that, referring to socialization, the child had suitable development on what is expected from a 6 years old child on skills that did not involve oral language, such as manifesting her feelings, playing with four or more children in cooperative activities

without constant supervising, imitating adult roles, giving comfort to colleagues when these are sad, choosing her own friends, planning and constructing and acting parts of stories (being this accomplished by means of gestures and vocalizations). The activities involving oral language were below expected from her age. About her cognition, she presented performance suitable for a child 2 or 3 years old, highlighting that in what refers to behaviors which involve oral language the child would accomplish them by means of gestures combined with vocalizations.

The evaluation of the receptive vocabulary was done by means of the Peabody Picture Vocabulary Test –- PPVT[14], in which the child obtained a score considered below average. The child's performance on the PROC[13] has confirmed the evolution seen on her dialogic skills, in which it was possible to see the presence of communicative intent, at the start of the interaction with participation on the dialogic activity. It was observed that such behaviors were less often present when compared to responses giver to her counterpart and to waiting its participation in its communicative turn. Referring to communicative functions, it was determined that the instrumental, interactive and naming functions were rarely present, while the informative function was absent. The protest function was the more often present. The child used, at the reevaluation time, as means of communication, articulated vocalizations and non-articulated vocalizations with intonation on the language (jargon),with presence of non-symbolic elementary gestures and the production of some isolated words. Referring to cognitive development, about object manipulation, she showed fast and superficial exploration, persisting on the activity when some obstacle appeared, trying to overcome it. She made conventional use of the objects shown at the start of the symbolic child play, being herself at the beginning of the representative period.

DISCUSSION

The clinical manifestations in cases of Global Developmental Delay start to be seen before the third year of life, highlighting the importance of early diagnosis and intervention process, what certainly contributes to the evolution of the child seeking the development of functional communication. In the present case, the clinical manifestations, such as the loss of interest by toy and the use of the others as tools to execute the desired activities, started to be seen by the mother around the 2nd year of the child, and at such time the family has sought speech-language pathology care. The results of the pre-intervention evaluation evidenced developmental delay in all of the analyzed areas (language, motor, cognition, self-care and socialization), resulting in the presence of a Language Delay as part of a Global Developmental Delay, that was after confirmed by neurological diagnosis, seen that the GDD diagnosis is eminently medical[7].

In possession of the results from the anamnesis and the speech-language pathology evaluation, this study, focused initially, on the suitability of the linguistic, social and cognitive skills of the child. The question regarding the possibility of identifying a better therapeutic approach for such children has been discussed on literature, reinforcing the importance of determining the individual profile of skills and inabilities of each subject as a ground to define the intervention model to be adopted and the family's participation in the choice of the approach to be adopted[15]; however in GDD cases, there is no way to ignore behavioral questions which permeate the entire development and interfere in the acquisition of linguistic skills.

In the described intervention process, the initial specific goals involved the work to increase the attention span, eye contact, remaining inside the room, establishment of joint-attention and diminishing of tantrum behavior, use of adult as object and non-functional stereotypies; at this starting moment, it was chosen a behavioral-ground approach (applied behavior analysis). As result, the child has shown improvements on establishing eye contact, started to remain more time in the therapy room and to establish more time focusing on objects, and diminished her tantrum behaviors and stereotypies. In regards to communicative intent, she started to present more communicative intent, seeking, at some moments, the interaction and having an increase on the occurrence of the instrumental function accomplished by means of gestures. However, several of her communicative skills were still absent or under leveled, being proposed, then, a rerouting of the case, with an intervention proposal still on behavioral ground, but adopting principles on a more functional character. This rerouting was made after the family had refused to seek the alternative communication services indicated by the speech-language therapist at the moment and had being oriented about the best way to suit the child to establish an efficient communication skill. To be highlighted that in this study it was mostly used the behavioral-ground approach, however, the evolution presented by the child inside the therapeutic process evidenced the necessity of rerouting the intervention to a functional approach. Inside the behavior perspective, the functional approach is that in which every worked behavior must be based on the child and its family's context and environment.

Considering that the communication process involves the interaction between, at least, two individuals, in which there is the exchanging of information, being it by verbal or non-verbal means, it is highlighted the importance of the joint-attention development, which involves directing and keeping visual attention to the communicative partner, being indispensable to the child to socially engage and develop cognitive functions. This skill is, therefore, considered precursor to the development of the language. Studies point important deficits on this skill in GDD children, which must also be related to the severity of the social symptoms shown by these children[16,17]. Other works point that, even with the joint-attention severely compromised and being used as an early marker of these cases, it is not completely absent[18]. It is evident, in the presented case that, up from the moment that it was possible to develop joint-attention, between the child and the speech-language therapist, bigger improvements were achieved in the intervention process, mainly in the procedure model directed to the child, enabling the use of applied behavior analysis principles, with goals to develop relevant social skills repertories and reduce unsuitable repertories, by means of methods based on behavior grounds.

The use of behavioral techniques such as imitation, waiting and mand-model went on because these were facilitating strategies on the directing of the therapeutic process, commonly used in similar cases and provided, to the child in the present study, increase in occurrence of behaviors deemed as suitable and desirable, such as eye contact, directed focus, with improvement also on the symbolic conducts and communicative intent with an increase on verbal productions and bigger adequacy on social interaction.

Another aspect considered fundamental to the obtained evolution on the speech-language pathology intervention reported here was the guidance and bigger participation of the parents in the proposed intervention, even when sometimes, they have refused to follow the giver orientations about the best educational approach to be adopted by the development of an efficient communication skill perspective. Thereby, the results achieved in the intervention could also be used and seen in the child's natural environment, even with some limitations. The positive effect of the guidance to parents towards questions on communication and language, done together with the therapeutic process is evident.

CONCLUSION

The identification of the best therapeutic approach for children with language delays as part of a GDD must be done at the beginning of the process, being that the decisions about the suitable approach must be thought over constantly not only as a result of the diagnosis per se, but also because of the general and specific symptoms manifestation –- which varies according to the development of the child and the evolution of the intervention process. These decisions must be guided by the professional's experience, but also on the expectations and limits of each family.

RESUMO

O objetivo deste trabalho foi descrever um processo de intervenção fonoaudiológica focado na adequação das habilidades linguísticas, sociais e cognitivas de uma criança com Distúrbio de Linguagem como parte de um Transtorno Global do Desenvolvimento (TGD), sob a perspectiva comportamental. A criança em questão era do gênero feminino e foi diagnosticada numa clínica-escola de Fonoaudiologia e encaminhada ao diagnóstico neurológico aos 2 anos de idade. Logo após o diagnóstico iniciou-se a intervenção fonoaudiológica individual, com base numa perspectiva comportamentalista de base mais tradicional; no entanto, ao longo do processo, houve mudanças no direcionamento da intervenção, sendo aqui relatados os dois primeiros anos de intervenção e apresentados dados da reavaliação fonoaudiológica no início do terceiro ano de intervenção. Como resultado da intervenção, houve melhora da linguagem receptiva e expressiva, sendo que a criança apresentou evolução quanto ao aspecto comportamental e aquisição de habilidades comunicativas, associando respostas verbais à ações. Além disso, houve aumento do contato ocular e do tempo de atenção e de aspectos relacionados ao simbolismo. O caso foi descrito com a preocupação de deixar claro que nem sempre é fácil a identificação da melhor abordagem terapêutica para essas crianças logo no início do processo, sendo que as decisões acerca da abordagem adequada devem ser repensadas constantemente não somente em decorrência do diagnóstico em si, mas também das manifestações da sintomatologia geral e específica – que variam conforme o desenvolvimento da criança e a evolução do processo de intervenção. Essas decisões devem ser pautadas na experiência do profissional, mas também na expectativa e no limite de cada família.

DESCRITORES: Fonoaudiologia; Transtorno Autístico; Linguagem Infantil; Desenvolvimento Infantil; Estudos de Intervenção; Resultado de Tratamento

REFERENCES

1. Nicolielo AP, Hage SRV. Relações entre processamento fonológico e linguagem escrita nos sujeitos com distúrbio específico de linguagem. Rev CEFAC. 2011;13(4):636-44.

2. Gertel MCR, Maia SM. Reflexões acerca do papel do fonoaudiólogo junto à família de uma criança com Transtorno Global do Desenvolvimento: estudo de caso. Rev. Soc Bras Fonoaudiol. 2010;15(3):436-41.

3. Fernandes FD, Cardoso C, Sassi FC, Amato CH, Sousa-Morato PF. Fonoaudiologia e autismo: resultado de três diferentes modelos de terapia de linguagem. Pró-fono R. Atual. Cient. 2008;20(4):267-72.

4. Fernandes FDM, Miilher LP. Relações entre a Autistic Behavior Checklist (ABC) e o perfil funcional da comunicação no espectro autístico. Pró-fono R. Atual. Cient. 2008;20(2):111-6.

5. Luyster RJ, Kadlec MB, Carter A, Tager-Flusberg H. Language assesssment and development in toddlers with autism spectrum disorders. J Autism Develop Dis. 2008;38(8):1426-38.

6. Smith V, Mirenda P, Zaidman-Zait A. Predictors of expressive vocabulary growth in children with autism. J Speech Lang Hear Res. 2007;50(1):149-60.

7. Silva RA, Lopes-Herrera SA, De Vitto LPM. Distúrbio de linguagem como parte de um transtorno global do desenvolvimento: descrição de um processo terapêutico fonoaudiológico. Rev Soc Bras Fonoaudiol. 2007;12(4):322-8.

8. Pereira A, Riesgo RS, Wagner MB. Autismo infantil: tradução e validação da Childhood Autism Rating Scale para uso no Brasil. J Pediatr. 2008;84(6):487-94.

9. Lopes-Herrera AS, Hage SRV. Princípios da intervenção com base comportamental em crianças sem linguagem oral. In: Lamônica DAC. Estimulação da linguagem (aspectos teóricos e práticos). 1ed. São José dos Campos: Editora Pulso; 2008. P. 55-73.

10. Coplan J. The early language Milestone Scale. Austin: Pro-Ed; 1993.

11. Williams LCA, Aiello ALR. O Inventário Portage Operacionalizado: intervenção com famílias. 1st ed. São Paulo: Memnon/FAPESP; 2001.

12. Gesell A. Gesell e Amatruda diagnóstico do desenvolvimento: avaliação e tratamento do desenvolvimento neuropsicológico do lactente e da criança pequena, o normal e o patológico. 3.Ed. São Paulo: Atheneu, 2000

13. Zorzi JL, Hage SRV. PROC Protocolo de observação: avaliação de linguagem e aspectos

cognitivos infantis. São José dos Campos: Pulso; 2004.

14. Dunn LM, Dunn LM. Peabody Picture Vocabulary Test – Revised. Circle Pines, MN: American Guidance Service;1981.

15. Fernandes FD, Cardoso C, Sassi FC, Amato CH, Sousa-Morato PF. Fonoaudiologia e autismo: resultado de três diferentes modelos de terapia de linguagem. Pró-fono R. Atual. Cient. 2008;20(4):267-72.

16. Misquiatti ARN, Brito AC Terapia de linguagem de irmãos com transtornos invasivos do desenvolvimento: estudo longitudinal.Rev Soc Bras Fonoaudiol. 2010;15(1):134-9.

17. Mundy P, Newell L. Attention, joint attention, and social cognition. Curr Dir Psychol Sci. 2007;16(5):269-74.

18. Menezes CGL, Perissinoto Jacy. Habilidade de atenção compartilhada em sujeitos com transtornos do espectro autístico. Pró-fono R. Atual. Cient. 2008;20(4):273-8.

Received on: October 10, 2012
Accepted on: July 2, 2013

Mailing address:
Ana Paola Nicolielo
Al. Octávio Pinheiro Brisola, 9-75 –
Clínica de Fonoaudiologia
Bauru – SP – Brasil
CEP: 17012-901
E-mail: anapaolanicolielo@yahoo.com.br

ERRATUM:

In this article, published in the journal *Revista Cefac*, volume 16(4):1351-1360, page 1351, **where it is**:

Author: Bianca Lopes Rodrigues Gonçalves

Read:

Author: Bianca Rodrigues Lopes Gonçalves