

Massage Therapy As A Physical-Psychological Intervention Strategy In A Patient With Cerebral Palsy

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ABSTRACT

Cerebral palsy refers to a neurological disorder that produces alterations of motor control of early onset and not of progressive character. Now, according to etiology, Ruiz and Arteaga [1] also delimit the different factors or causes that can produce cerebral palsy, according to prenatal (during the baby's gestation), perinatal (during the baby's birth) and postnatal (after birth, before the brain reaches its full maturity) factors. The health personnel as well as the person in charge of the patient must work together to detect or decode the patient's needs, which turns the work into a symbolism that must be worked on and reinforced without exceptions, since it is what links us to the patient and the patient to us.

Keywords

Cerebral palsy, Massage therapy, Language, Social reinforcer.

Introduction

Madrigal [2] comments that William Little, in 1860, proposed that Cerebral Palsy is a disorder that occurs in the first years of life, causing spasticity of the muscles of the legs to varying degrees, and with less involvement in the arms. However, Sigmund Freud [3] described this problem as a disorder of the developing brain, due to difficulties at birth in some cases, sometimes accompanied by mental retardation, visual disorders and convulsions (p. 248).

However, Cerebral Palsy refers to a neurological disorder that produces alterations in motor control of early onset and not progressive in nature, but in addition to the motor compromise, it can affect other aspects that may hinder the child's development,

in this case, disorders such as mental retardation, language and communication problems, sensory disorders, mental disorders, among others [4].

Another definition is that of Ruiz and Arteaga [1], who state that Cerebral Palsy (CP) is a global disorder of the person consisting of a permanent and non-changeable disorder of muscle tone, posture and movement, due to a non-progressive lesion in the brain before its development and growth are complete. This lesion can generate the alteration of other higher functions and interfere in the development of the Central Nervous System.

Cerebral Palsy (CP) is described as the set of consequences derived from a global disorder of the person consisting of a permanent, but not immutable, disorder of muscle tone, posture and movement, due to a non-progressive lesion suffered by the brain before its

development and growth are complete. Due to the irreversibility of neurological lesions, the disorder is permanent, but not immutable, since its characteristics may change evolutionarily or involuntarily, even though the lesion is not progressive, does not increase or decrease and does not constitute a degenerative disorder.

Thus, Ruiz and Arteaga [1] also propose a typological classification that derives from taking into consideration only the most characteristic aspect of the syndrome: the neuromotor manifestations. For this purpose, we will consider three classificatory criteria on which there is broad consensus: topographical criterion, which refers to the anatomical area affected; nosological criterion, referring to the neurological symptoms with respect to muscle tone, movement characteristics, balance, reflexes and postural patterns; and functional-motor criterion, referring to the overall degree of neuromotor involvement.

Typology of the Syndrome According to Neuromotor Manifestations		
Criterion	Frame type	Characteristics
Topographic	•Tetraparesis or tetraplegia	Upper and lower limb involvement
	•Dyspareisis, diplegia or paraplegia	Major involvement of the lower limbs
	•Hemiparesis or hemiplegia	Involvement of both limbs on one or the other side of the body.
	•Monoparesis or monoplegia	Involvement of a single upper or lower limb
Nosological	•Spastic	Increased muscle tone (hypertonia). Affectation of the antigravitational musculature. Difficulties in dissociating the movements of the different parts of the body.
	•Diskinetic or athetoid	Accentuated involuntary movements, facial gesticulation and difficulties in oral mobility. The picture is accentuated when the subject is emotionally activated and when trying to perform voluntary movements.
	•Ataxic	It affects the coordination of movements, their precision and balance.
	•Mixed forms	Most of the PC frames have two or more types of the characteristics mentioned in the previous types.
Functional	•Slight	Ability to ambulate autonomously. Ability to manipulate small objects with at least one hand.
	•Moderate	Involvement of two or more limbs. Very limited autonomous movement. The use of technical aids for ambulation and manipulation is required. Aids are required for the performance of activities of daily living.
	•Serious	Affectation of the four limbs. No possibility of autonomous walking and manipulative capacity.

However, it is Rubio and Métayer [5] who delimit the different factors or causes that can produce cerebral palsy, according to prenatal (during the baby's gestation), perinatal (during the baby's

birth) and postnatal (after birth, before the brain reaches its full maturity) factors.

Prenatal Factors

- Maternal hemorrhage
- Maternal hyperthyroidism
- Maternal fever
- Chorioamnionitis (infection of placental membranes and amniotic fluid surrounding the fetus in utero)
- Placental infarction (degeneration and partial death of placental tissue).
- Gemellarity
- Exposure to toxins or drugs
- Infection with syphilis, toxoplasma, rubella, cytomegalovirus, herpes, hepatitis, or acquired immunodeficiency virus (HIV)
- Cerebral infarcts due to occlusion of arterial or venous vessels.
- Cerebral dysgenesis or malformations
- Genetic factors

Perinatal Factors

- Prematurity (when gestational age is less than 37 weeks).
- Perinatal asphyxia due to impaired cerebral oxygenation (with subsequent hypoxic-ischemic encephalopathy, a frequent cause of CA in both preterm and term newborns).
- Hyperbilirubinemia (due to increased bilirubin levels in the blood, leading to jaundice of the skin).
- Perinatal infections

Postnatal Factors

- Cranial traumas
- Meningitis or inflammatory processes of the meninges.
- Encephalitis (acute inflammatory processes of the central nervous system).
- Intracranial hemorrhage
- Infarction or partial death of brain tissue.
- Hydrocephalus (due to increased intracranial cerebrospinal fluid and increased pressure at some point in its evolution).
- Neoplasms or intracranial tumors.

Moreover, the production of speech, language and gestures for communication is often impaired in cerebral palsy. Communication difficulties associated with cerebral palsy can be multifactorial, stemming from motor, intellectual or sensory impairments, and children with this diagnosis may experience mild or severe difficulties in expressing themselves. They are usually referred to speech and language treatment services to maximize their ability to communicate and help them take as much of an independent role in interaction as possible. This may include introduction to augmentative and alternative communication systems, such as symbol graphics or speech synthesizers, as well as treatment of children's natural forms of communication. Various strategies have been used for the treatment of communication disorders associated with cerebral palsy, but evidence of their effectiveness is limited.

Medical Records

Date: 10/November/2017

Report: Vazquez Raposo Alan Suresh

Child's name: Rioja Shasho Victoria
Age: 15 years 4 months
Date and place of birth: May 27, 2013, Benito Juarez, CDMX.
Current school year: Currently not attending school, however he finished 1st grade of elementary school.
Time of residence in the locality: Since birth
Mother's information
Mother's name: Berenice Shasho Michell
Age: 39 years old
Schooling: 6th semester of undergraduate degree in Economics
Religion: Catholic
Occupation or profession: Housewife and freelance projects.
Financial contribution at home: Some minor expenses
Smoking: yes (only during parties) Alcoholism: yes (only during parties) Drugs: no
Childhood illnesses: Scarlet fever
Socioeconomic problems: Mention yes, since Victoria has many expenses.
Family and marital problems: She does not have a good relationship with Victoria's father, sometimes having arguments with him, since he does not look for or care about Victoria even though she is at home.
Name of maternal grandfather: Víctor Manuel Shasho Olvera
Age: 64 years old
Religion: Catholic
Past and Present Illnesses: Suffered from sciatic pain

Name of maternal grandmother: Maria Luisa Michell Valdemar
Age: 62 years old
Religion: Catholic
Past and Present Illnesses: None

Reason for Consultation

Mrs. Berenice points out that Victoria has had cerebral palsy since birth and that for her it is not a 'problem' as other people might think; she associates this with the fact that there was medical negligence. On the other hand, she points out that the whole family accepts Victoria, although at the beginning it was very difficult. Likewise, she has noticed many advances in Victoria, although they have been very slow, but for her they have been very significant, in addition to the fact that Victoria is very knowledgeable.

Victoria has attended two schools, she attended kindergarten in the Del Valle neighborhood and up to 2nd grade in a school located in E. Rebsamen, Narvarte neighborhood, Mrs. Berenice comments that the girl liked to go to school a lot, since she lived with her friends, and the teacher, since she was the only girl in the classroom, spoiled her.

However, she points out that Victoria did not like the art class, since she does not like working with anything that gets her hands dirty, on the other hand, she comments that she liked the physical education class because they took her out to the playground and played music for her.

Mrs. Berenice commented that Victoria was not planned, but later she was a wanted child. She also mentions that it was a very

difficult pregnancy, since she fought a lot with the girl's father and she cried a lot, she also had a lot of symptoms such as vomiting since she could not tolerate vitamins or food and for this reason she had to inject herself.

Victoria was born at 7 months gestation and her mother was given emergency care because she was carrying her head outside. When she was born they did not let her see her, since she did not breathe and they had to put her in the incubator, with catheter and respirator, she saw her for the first time approximately three or four days after she was born.

When her mother saw her for the first time, she felt very bad because the baby was only 30 centimeters long and weighed 1.750 kilograms. Berenice mentions that the baby was in a private hospital, but it was very complicated to make the payments because the hospital was very expensive.

When Victoria was two months old she was feeling better, however they did not want to give her to her mother because she was underweight, although Mrs. Berenice saw her well, since it was the first time she cried and where she was informed that the child had a psychomotor delay and needed early stimulation.

Berenice also commented that Victoria's cerebral palsy was detected at the San Angel Inn hospital, although it was first treated as psychomotor retardation and the doctors did not give her much hope that she would survive. According to the nutritional aspect, her mother said that she ate very well by mouth but that she vomited a lot, telling the doctor her concern that this was not normal, but the doctor said that in Victoria's condition this was normal, although Berenice was never convinced. Some time later she took her to the doctor just to have some tests done, but she had to have emergency surgery because Victoria's esophagus was very damaged due to the vomiting, and a tube was put in so she could feed her, and now she only gives her water orally. Through the tube she feeds her chayote, green beans, pumpkin, carrots, amaranth, corn oil, maria crackers, peaches in syrup, pears, apples, etc., giving her all these ground foods. Berenice also mentions that sometimes Victoria controls her sphincters, so she wears a diaper, and when she takes her to the bathroom she is very scared, maybe because she feels like she is falling and because the toilet is too big; also, Berenice tells us that sometimes she goes to the bathroom in the clinic, and when that happens she laughs a lot or gets scared.

Berenice, on the other hand, mentions that now she only goes to the Brain Clinic for Victoria's exercises and that she only goes to the Orthopedist for a week and has to make an appointment for six months later, so there is not much follow-up, and for this reason she only goes to the Brain Clinic and at home to work with Victoria's exercises and massages.

Her mother told us that the girl currently suffers from gastritis, and when she was three years old she got intestinal paralysis because at first she only got sick with the flu and they gave her a lot of penicillin for her age, and that is when her intestine became very

inflamed and when they took her to the emergency room she was in agony, but fortunately she arrived in time. She also mentions that about a year ago she had an inflamed salivary gland, due to not passing saliva properly. So, Berenice tells us that Victoria has absolutely all her vaccinations and that she is about to receive her twelve year vaccination; she also mentions that she has the AH1N1 influenza vaccine and the human papilloma vaccine, although she has yet to receive the booster shots. She also tells us that Victoria is very sensitive to the sun, because when she has been exposed to it for a certain period of time she gets pimples and her skin becomes very red, also causing dermatitis, so she recommends not to expose her for a long time.

On the other hand, Berenice says that the girl always listens to music in her free time, and that she gets angry if she doesn't, so they have to put a tape recorder next to her while she is sitting or lying down. Another important aspect is that she has friends, both children of her own condition and regular children, but they do not frequent them as often, although when they see each other, either her friends go to her house or Victoria goes to their house. Likewise, her mother says she gets along well with her friends.

Berenice describes Victoria as tender but with a strong character, because if a person does not understand her, she gets angry; her mother also tells us that Victoria is sometimes easy to handle, because of her strong character, because there are times when she does not pay attention to her because of her anger. On the other hand, Victoria's biggest concern is that her father does not go to visit her because he is very special to her, and when he does not go to see her, she begins to misbehave. Her mother also indicates that the girl identifies more with her father, perhaps because she hardly ever sees him.

According to Berenice, Victoria's virtues are that she is very tender, that you can talk to her and she listens to you, she is cute and that she wins people over with her smile, and she assures that Victoria has no discrimination problems or anything like that. Now, Berenice says that Victoria's biggest flaw is her father, jokingly, rectifying that in truth is that she is very sentimental because suddenly she cries and gets sad in a tantrum way or because she misses her father. On the other hand, her mother mentions that in her family she is labeled as 'sickly', and that she has worked with such people, or only with those who are willing to understand. Berenice describes that Victoria likes to bathe and also to be read to and sung to, and that when her mother does not bathe her she sometimes vomits on purpose all over her body so that she can be bathed completely, or she uses the bath for the same purpose; she also indicates that she does not like to be combed.

Regarding Victoria's future plans, her mother comments that they have talked to one of their friends so that maybe in the future they could get married and start a family, and both children would like that, according to Berenice.

Regarding Victoria's dreams, Berenice points out that she does dream often, but mostly pleasant dreams for her, because from

time to time she moves and smiles when she sleeps; however, very occasionally she cries when she is asleep, so she attributes it to a nightmare or unpleasant dream. On the other hand, Berenice tells us that Victoria expresses all the emotions she feels (joy, anger, worry, etc.), and that in her face and movements all these emotions are very noticeable. Victoria also likes to receive gifts, especially clothes. Something interesting is that she chooses her own clothes, preferably pink.

Now, about the girl's fears, her mother mentions that she is afraid of babies crying, because when she is near a crying baby she gets scared and starts crying too; when we asked Berenice if Victoria is afraid of being in the dark, she said no, in fact, she likes to be alone listening to music.

On the other hand, Berenice has talked with her about gender issues, and if she were born again she would also like to be a girl, as her mother mentions that she is very flirtatious. Regarding her sexual development, her mother mentions that she has already talked to Victoria about it, and that physically she is developing well, as she already has hair and perspires, the latter of which bothers Victoria often, as she does not like to smell bad. In addition, Mrs. Berenice tells us that Victoria does know her body, because when she bathes her, she tells her which parts of her body she knows (breasts, legs, arms, vagina, etc.). Also, her mother mentions that she has had vaginal infections and has counteracted them with ointments, or has taken her to the doctor for medication, but now that she no longer wears the diaper so much, these infections have almost completely diminished. When she has such an infection, Victoria has a different cry or laugh, and this is how her mother has become aware of problems of this nature. Berenice also states that Victoria has never been sexually abused, because when she is sometimes left alone her mother locks her in so that no one enters (and she likes to be alone, as previously mentioned), or she leaves her in charge with a very trustworthy person from her family, mainly.

Berenice mentions that she sees Victoria's physical development well. She also points out that she does not suffer from frequent flus, but when she gets sick she gets a little sick, and even so she does not like to miss the Brain Clinic because she likes to attend very much. Mrs. Berenice tells us that in November 2013 the doctors gave her a little hope that with a surgery on her legs she might be able to walk, and such operation had a cost of 100,000 pesos, and such money was difficult to raise. However, her mother is not happy after the operation as she expected much more from such surgery, as she still could not walk or even stand on her own, and Berenice thinks she observed a setback in Victoria, because she used to move more.

According to the sensory aspect, Mrs. Berenice mentions that Victoria does not have and has not had any ear infection and, on the contrary, she has a very good hearing. Regarding her heart, Mrs. Berenice tells us that currently she does not have any problems, but that when she was little she had a small tachycardia, but as time went by it got better. On the other hand, her mother points out that she has suffered several accidents, such as falls from the bed to the floor or in the

street, but none of these have been serious. Currently Victoria takes daily medication for gastritis, such as milk of magnesia, omeprazole and metoclopramide, although her mother indicates that both the milk of magnesia and the omeprazole she tries to give them every third day because it is a lot of medication. Victoria has been taking these medications for the past four years, as they were prescribed to her since she was fitted with an intestinal catheter.

Victoria attended the Brain Clinic for therapy and another neurological process, and also attended another three years at Mediland Private Clinic, to treat aspects such as her motor skills, but she had little progress according to Mrs. Berenice, who only took her to the water pond that these centers had. Likewise, the lady is very happy with the child's physical development, talking about her weight, body mass and height, as she has had many advances, mainly in the Brain Clinic. On the other hand, on weekends Victoria's mother comments that her daughter misses going to the sessions at the Brain Clinic, since she likes it very much and her mother talks to her so that she is calm; she also mentions that she massages Victoria with cream, preferably, since she does not like oil.

Mrs. Berenice thinks that, besides not crying and not being able to breathe, the hypoxia that Victoria had was the biggest problem she had at birth, since that was the root of the catheters and other medical care.

Victoria, as her mother had mentioned before, has very good hearing and hears clearly from one room to another, and therefore does not use hearing aids. Her mother tells us that Vitoria sometimes follows instructions she gives her, because then she is in a bad mood, the same happens with obedience. Even so, they have a very good communication and Victoria understands everything they tell her. The lady also points out that when Victoria is not understood by others, she gets frustrated and angry, which happens with her family or other people. Also, according to the lady, she understands and follows family or other people's conversations.

Victoria does not like television, unless it is very interesting for her, and she prefers much more music played on a tape recorder, her mother tells us. In addition, her mother points out that Victoria sees well up close but does not see well from a distance, because in addition to needing glasses she has strabismus; although she has had her glasses for two years, Mrs. Berenice does not put them on Victoria when she takes her to the clinic, because since she lies down during all the sessions it is uncomfortable for the therapists to give her massages. Her mother also notes that Victoria does like her glasses, and that she wears them mostly to look 'flirtatious'. On issues of Victoria grabbing objects, her mother comments that she only presses them if Victoria really likes them even if she drops them, or just reaches for them.

Mrs. Berenice also tells us that Victoria has small and large splints (orthopedic aids) for her extremities; she also mentions that the girl does not do any sports, but she does do exercises such as sit-ups, rolling, etc.

Victoria, on the other hand, has repetitive behaviors such as grinding her teeth, and she used to pull her hair and bite herself, but her mother gave her 'manazos' to correct such behaviors. In addition, she has other behaviors such as staring at any light, and her mother has to move her to stop her from staring at it. On a daily basis, the first thing Victoria does when she wakes up is to ask for food and her mother has to wait approximately ten minutes to feed her breakfast, as she sometimes has an upset stomach and may vomit. Now, when she arrives from the clinic, at approximately 8 pm, Mrs. Berenice changes Victoria's diaper and plays music for her until she falls asleep.

The house where they both live is owned by Mrs. Berenice's parents, which has all the services, and has two bedrooms, a living room, a kitchen/dining room and a bathroom. It should be noted that the land where her home is located is made up of other homes of other family members, so the garden of the land is not used because it is used as a clothesline by another family.

Mrs. Berenice would like Victoria to complete advanced academic studies, although she says she can only finish high school because of her situation. Her mother also envisions Victoria with a family and independent as an adult, but with her always present for the care Victoria needs. Likewise, Mrs. Berenice hopes that with the therapy at the Victoria Clinic she will make more progress and that her quality of life will improve, and that she will have the same desire and motivation to move forward. Mrs. Berenice says she feels happy.

Evaluation Report

Physical Ability Assessment Guide For Children With Cerebral Palsy Aged 1 Month To 5 Years.

Evaluation: Sophie Levitt (1995).

Name: Rioja Shasho Victoria

Age: 10 years

Date of birth: May 27, 2013, Benito Juárez, CDMX.

Date assessed: 06 February 2017.

Evaluator: Vázquez Raposo Alan Suresh

Areas to be evaluated:

Prone decubitus

Supine decubitus

Sedation

Bipedation- Walking

Scale:

No ability.....0

Start.....1

Partial, awkward, insecure or infrequent.....2

Performs totally alone but performs abnormally.....3

Performs totally alone, performing almost normally.....4

Prono Decubit

Age	Activity	Scale
0-3 months	Can be positioned, turn head	4
	Elevates the head	4
	Keeps it elevated	4
	On the forearms, head, lifting the chest	4
	Incorporates on the knee and forearm	2
3-6 months	Reaches forward with right upper limb (extended)	0
	Reaches forward with left upper limb (extended)	0
	Turns to the right	4
	Turns to the left	4
6-9 months	Crawls on his abdomen	0
	Stands on hands with outstretched fingers	0
	Rises up on hands and knees	0
	Reaches forward with one hand, posture on the hands	0
9-12 months	On hands and knees, raise upper limb and opposite lower limb.	1
	Pivot the body by bringing the limbs to the right.	1
	Pivots the body with limbs to the left	1
	Reciprocal crawl	0
	Comes to sitting position from hands and feet	0
	Semi kneeling position with manual support	1
	Incorporates with upright kneeling position with manual support	1
	Walks with hands and feet	0
12-24 months	Crawls on the table and sofa	0
	Crawls up the stairs	0
	Crawls backwards down stairs	0
	Kneeling upright, hips extended, no support	0
	Walks with knees forward	0
Rises to standing position, without support	0	

Age	Activity	Scale
0-3 months	Can be positioned, turn the head.	4
	Slightly overlapping the backward fall of the head.	4
	Reaches out to grasp something all over the floor at the sides.	0
3-6 months	Keeps head in midline, carries weight symmetrically.	4
	Join hands, symmetry.	1
	Lifts the head, overcomes its backward fall.	3
	Reaches across the body	2
6-9 months	Extends the hips in a bridging fashion, feet flat.	0
	Turns to the right.	1
	Turns to the left.	1
	Reaches plantar pressure.	0
	Lying extended, upper limbs descended, head in midline, turn.	3
12-24 months	Sits from the right lateral ulna, alone.	0
	Sits from left lateral ulna, alone.	0
	Pulls self to sit up.	0

Sedestation

Age	Activity	Scale
0-3 months	Can be positioned, head, trunk supported, hips flexed.	0
	Vertical control of the head, trunk supported.	3
	Leans on forearms or hands, trunk with support.	0
3-6 months	Lateral sitting on hands, trunk without support.	0
	Sits on chairs with backrest, armrests or chest support.	3
6-9 months	Sitting leaning on one hand, use the other hand.	0
	Protects himself with his hands forward.	0
	He sits without hands, alone.	0
	Protects himself on the right side.	0
	Protects himself on the left side.	0
	He sits forward, he sits up again alone.	0

9-12 months	Sitting, reaches from side to side, to one side overhead.	0
	Sits, turns, reaches to the right.	0
	Sitting, turning, reaching to the left.	0
	Lateral sitting on the right head.	0
	Lateral sitting on the left head.	0
	Switches hands and knees.	0
	Sits in a normal chair, alone.	0
	Sitting in a chair, reaches in all directions.	0
	Incorporates from sitting to standing by holding on.	0
	Sits and pivots on the floor.	0
	Sits and pivots in a chair.	0
	Moves with the buttocks on the floor.	0
	Anteroposterior swing reactions.	0
	Lateral swing reactions.	0
12-24 months	Sits alone on a low stool.	0
	Incorporates into sitting to standing without support.	0
	Sits on a high stool with legs dangling.	0
	Sits squatting to standing and returns to squatting.	0
Protects himself if he leans backwards.	0	

Bipedation - Walking

Age	Activity	Scale
0-3 months	Weight bearing, feet planted, trunk supported.	0
	Steps, trunk supported.	0
3-6 months	Standing upright, leaning on forearms or holding on tightly, pelvis supported.	0
6-9 months	Pulls himself to stand up, stands.	0
	Standing upright, stands, raises right lower limb.	0
	Standing upright, stands, raises left lower limb.	0
	Walks with hands.	0
	Standing upright, holding on with one hand, reaching in all directions.	0
9-12 months	He stands up on his own.	0
	When standing, he slouches and recovers his position.	0
	Walks, holding both hands or holding on to a walker.	0
	Walks holding one hand.	0
	Walks alone.	0
	Walks carrying an object.	0
	Gets into a standing position from any position, without any support.	0
	Walks backwards.	0
Climbs stairs holding on to both sides, two feet per step.	0	
12-24 months	Protective staggering reaction if pushed from behind.	0
	Standing up, he kicks a ball.	0
	Throws the ball over his head.	0
	Runs.	0
	Walks, stands and turns (pivots).	0
	Walks up stairs holding on to one handrail, two feet per step.	0
Walks down stairs holding two handrails, two feet per step.	0	

Specific Neurophysiological And Neuropsychological Evaluation Of The Oro-Facial Cavity: Language.

García, B. (1990).

Name: Rioja Shasho Victoria

Age: 10 years old

Date of birth: May 27, 2013, Benito Juarez, CDMX.

Date of evaluation: February 06, 2017.

Evaluator: Vázquez Raposo Alan Suresh

Gag Reflex Swallowing

Activity	Gag reflex
Introduce abate tongues on the tip of the tongue.	Yes
Introduce abate tongues in the middle of the tongue.	Yes

Mouth Movement

Activity	Does perform	Does not
Open-close mouth	X	
Stick-out tongue	X	
Sucking upper lip	X	
Suck lower lip	X	
Carry tongue right lateral commissure		X
Carry tongue left lateral commissure		X
Sliding the tongue along the roof of the mouth	X	
Cleaning your teeth with your tongue		X
Extinguishing candle/ match		X
Blow to a feather		X
Blowing only to indicate		X

Program

According to the results obtained in the evaluation, and those provided by the mother, we can say that Cerebral Palsy refers to a neurological disorder, which produces alterations in motor control, however it is not progressive. It can also affect other aspects that may hinder the child's development, in this case, disorders such as mental retardation, language and communication problems, sensory and behavioral disorders, among others [4].

For this reason, we will carry out a repetitive weekly therapeutic program that includes massage therapy, language program and emotional therapy, so that the child's rehabilitation is adapted to her specific needs and thus achieve her continuous evolution. For this we will carry out these activities in the following schedule.

Schedule	First monday	Second monday	Third monday	Fourth monday
17:00 a 17:50	Massage therapy	Massage therapy	Massage therapy	Massage therapy
17:50 a 18:50	Language Program	Language Program	Ludo therapy workshop	Ludo therapy workshop

Body Massage

The components of motor skills, the visible part of motor skills, the movements, are formed by two main components integrated in a situation of motor activity: voluntary motor skills and automatic motor skills. Thus, the motor learning carried out with the child is necessary (González, 2007), since mechanical actions, with certain intensity and the rhythm of the same when applied, can influence the organism to achieve a better mental and physical balance.

Objective

- To stimulate, modify and maintain tone in Victoria's muscles. To achieve this, a series of manual therapeutic massages will be performed.

Materials

- 1 Towel
- 1 Mat
- 1 Pillow
- 1 cream
- 1 Antibacterial gel
- 3 Tables
- 2 Blankets

Devices

- Recorder
- Music player

Procedure

Three tables will be placed two horizontally and one vertically in a 'T' shape, then the mat, blankets and pillow will be placed. Afterwards, Victoria will be placed on the mats and the therapists will put antibacterial gel on her hands, to give the next step to the body massage therapy.

Reinforcement

While the body massages are being performed, she will be played songs that she likes so that she associates the massages as something "good" for her; thus, after observing cooperative behavior on Victoria's part, she will be given social reinforcers such as "very good Victoria", "you are doing great Victoria", "keep it up Victoria", etc.

Evaluation

The evaluation consists of an anecdotal record at each session.

Oro-Facial Massages

Objective

The objective of these massages is for Victoria to strengthen and tone the muscles of her face, allowing her to better gesticulate her expressions and this in turn to develop the articulation of sounds.

Materials

- 1 Towel
- 1 Mat
- 1 Pillow
- 1 cream
- 1 Antibacterial gel
- 3 Tables
- 2 Blankets
- 1 Toothbrush with soft bristles

Devices

- Recorder
- Music player

Procedure

Three tables will be placed two horizontally and one vertically forming a 'T', then the mat, blankets and pillow will be placed. Afterwards, Victoria will be placed on the mats and the therapists will apply antibacterial gel, to give way to the oro-facial massage therapy.

Reinforcement

While the oro-facial massages are being performed, songs will be played; thus, after observing cooperative behavior by Victoria, she will be given social reinforcers such as "very good Victoria", "you are doing great, Victoria", "keep it up Victoria", etc.

Evaluation

The evaluation consists of an anecdotal record at each session.

Language Program

The production of speech, language and gestures for communication is often impaired in cerebral palsy. Communication difficulties associated with cerebral palsy can be multifactorial, stemming from motor, intellectual or sensory impairments, and children with this diagnosis may experience mild or severe difficulties in expressing themselves. They are usually referred to speech and language treatment services to maximize their ability to communicate and help them take as much of an independent role in interaction as possible. This may include introduction to augmentative and alternative communication systems, such as symbol graphics or speech synthesizers, as well as treatment of children's natural forms of communication. Various strategies have been used for the treatment of communication disorders associated with cerebral palsy, but evidence of their effectiveness is limited.

Objective

To try to contribute to the improvement of communication processes, this involves, on the one hand, trying to improve Victoria's linguistic skills and on the other hand intervening with the environment.

Procedure

Tongue muscle (task to improve tongue muscle tone): this will be done in the first 5 minutes of speech therapy. With Victoria seated and the therapist positioned laterally, she is asked to open her mouth and a syringe with the plunger extended is placed inside her mouth. With this starting position she is given the following instruction: "Push with the tip of your tongue on the plunger of the syringe until you manage to place it in its initial position".

Now then, in the next 5 minutes of speech therapy, Victoria will lie down and a therapist will stand behind her and introduce both index fingers into her mouth at the level of the corners of her mouth, giving her the following instruction: "Victoria, I will stretch the corners of your lips until I make you smile, you must leave your mouth relaxed, and when I indicate it, try to bring my fingers together until they touch".

On the other hand, in the remaining 30 minutes, they will work on the visual and auditory recognition of vowels, showing them several drawings or cut-outs of each vowel (e.g. Letter A = Squirrel, showing them a picture of a squirrel). In addition, they will play songs that talk about the vowels and their pronunciation (e.g. The march of the vowels), so that through auditory imitation she will try to reproduce them.

Material

- 5 or 10 ml syringe
- Latex gloves
- Vowel didactic material
- Drawings or cut-outs
- Disney songs played on Ipod (previously loaded in the player).

Reinforcement

If she performs the instruction correctly she will be given a social reinforcer such as "very good Victoria", "you are doing great, Victoria", "you are working very well", etc., and then songs of her liking will be played on the music player.

Oral musculature: task to increase muscle tone and range of motion of the labial orbicularis labialis.

Evaluation

The whole session will be evaluated by means of an anecdotal record.

Emotion Work

Behavioral or personality problems could arise reactively to the different experiential situations of each person; or be subsequent, in a specific case, to the involvement of a particular brain structure due to injury. However, there may be numerous and significant factors that may determine alterations in the emotional development of those affected and in the appearance of behavioral problems.

Objective

The objective is for Victoria to carry out emotional development both individually, as well as socially appropriate, conducive to a stable environment.

Materials

- Photographs of her family.

Equipment

- Recorder
- Music player

Procedure

She will be presented with photographs of Victoria's family and will be told that they all love her, likewise the therapists will talk with her about the importance of family to finish by playing a song of her liking.

Reinforcement

Of social type, for example "very well", "we love you very much Victoria", likewise we will play her a song at the end of the session.

Evaluation

The evaluation will be an anecdotal record that will be carried out in each session.

Anecdotal Records

Monday, February 13, 2017.

This day was given the welcome where we met to meet the patient and her mother and to fully explain what would be the way of working, Victoria and her mother, Mrs. Berenice, arrived a little late but we were with them talking and we agreed on how we would approach the work together.

Monday, February 20, 2017.

We were with Victoria in the familiarization, so we would know more about her behavior and she would know us better. Also, we did the Sophie Levitt (1995) assessment, where the teacher helped us a lot.

Monday, February 27, 2017.

The therapists from last semester went to teach us the massages that will be done to Victoria during this semester. They also gave us tips and suggestions, as well as answering some of our doubts.

Monday, March 06, 2017.

We conducted the interview with Mrs. Berenice first in the green areas (outside) and then we moved to the inside of the Clinic in a more suitable place, since there was a lot of noise and distractions outside, and there were no empty cubicles to conduct such an interview. This day Mrs. Berenice did not bring Victoria, as we suggested it to her a day before.

Monday, March 13, 2017.

We worked with Victoria on the massage therapy, including the extra massages, at the same time we played her songs and played music that she likes. It is worth mentioning that the singer José José likes her a lot, according to what the mom tells us, so we decided to download some of his songs to the music player, since it makes her move a lot and respond better to his movements.

Monday, March 20, 2017.

Today we went for Victoria to the waiting room and we noticed that she came very happy, as she was smiling a lot, then we worked with her, performing the limb and oro-facial massages, at the end of these we did the extras.

Monday, March 27, 2017.

In this session we performed her massages to Victoria, but the tooth brushing, it was a little difficult for us because the child is bothered when we put the brush in her mouth and we noticed that she feels a little discomfort, we inferred that this is because the brush has very hard bristles, for this reason we asked her mother to buy her a brush with softer bristles.

Monday, April 03, 2017.

This day Victoria was very happy as we played the music she likes when we performed the massages.

Monday, April 10, 2017.

In this session we gave her oral-facial, body and extra massages, at the end of the session we had the speech therapy where we sat Victoria in her chair and presented her the image of the vowels, we told her which vowel it was, but we noticed that she did not pay attention to us and lowered her head, she was probably a little upset, so we decided to end the session, until that day she had shown that way because we inferred that it was not a matter of the therapy but in her daily life which had her upset.

Monday, April 17, 2017.

When Victoria arrived, she was in a very good mood, we took her upstairs and started with the massages at the end of them, we worked with emotions. Victoria was told a story, but we suppose that she did not like it very much since she wanted to vomit and to have somewhat aggressive attitudes such as trying to move with force so she was only shown pictures of her family.

Monday, April 24, 2017.

This day we worked with Victoria on her massages, she was very happy, at the end we took her to the Ludoterapia workshop, but we noticed that she was not very happy because there was a child who was crying and that did not please her, so we decided to put her aside and play the music she likes so that she would be calmer, at the end we took her to Berenice and we talked for a while with her about the progress she has made.

Monday, May 01, 2017.

Today Victoria arrived very happy and was very cooperative in her massages, when we were going to deliver her with Berenice she got angry, as she wanted to stay longer with the therapists, but we explained to her that it was time to go with her mom and that we would see her later to play music for her, and then she was calmer and more satisfied.

Monday, May 08, 2017.

When Berenice arrived, she told us that Victoria had not slept very well during the night and that on the way to the clinic she wanted to sleep in the truck, so she was very tired. So we went up to work with her both massages and speech therapy, it is worth mentioning that in the latter we discovered that if we place her little hand on our neck so that she feels the vibrations of our voice we get favorable results, since she likes it and makes sounds.

Monday, May 15, 2017.

When we went for Victoria, her mom again told us that she had not slept and that she felt tired, so she was instructed to bathe her at night and make her a tea so she could fall asleep. During the massage therapy Victoria was very happy and in the emotion therapy she was very focused and participative, as she paid a lot of attention to what the therapist indicated.

Monday, May 22, 2017.

Berenice told us that Victoria had slept more and was very happy. When we took her upstairs we started with the massages and put on some music, which made Victoria very happy, then we went to the Ludoterapia workshop that was being given in another room of the clinic.

Monday, May 29, 2017.

This day Victoria was very happy when we carried out the massages, then we decided to take Victoria to the Ludoterapia workshop so she could see other people in the clinic, Victoria was pleased to see the workshop and the people, as some children patients approached her to greet her and walk her in the chair. Later we took the girl to Berenice.

Monday, June 05, 2017.

No session due to patient's family complications.

Monday, June 12, 2017.

Today when working with Victoria she was very cooperative in terms of her massages, then in the emotion therapy we had fun as Victoria was laughing a lot and we were laughing with her. When we took her to her mom, she was upset, as she did not want to leave and we explained that we would see her tomorrow that she should not worry and she was calmer.

Monday, June 19, 2017.

When we went for Victoria to the waiting room, she looked happy and we greeted her, we went to the therapeutic room and started with the massages and at six in the afternoon we went to the play therapy workshop there Victoria was very happy, since on one occasion she screamed with excitement and smiled, then we took her to her mom and we said goodbye to both of them.

Monday, June 26, 2017.

When we arrived at the room, we waited for Victoria and her mom to arrive, minutes later they arrived, we greeted her and went to the room to start with the massages.

Monday, July 03, 2017.

Victoria arrived in a very good mood, which we took advantage of to give her massages with her Disney children's music. As for speech therapy with a straw cup we gave her water and did some exercises with her such as putting the straw for her to push it with her tongue.

Monday, July 10, 2017.

At the beginning of the session Victoria was very calm, then we started with the massages and played music, then in the next hour we did the emotion therapy, where we presented some images and pictures of her family members, she was very happy especially when we passed the picture of her mom.

Monday, July 17, 2017.

When we arrived with Victoria, she was crying because she had a sore throat, Berenice told us that in the morning she started with her discomfort and she had asked her if she wanted to attend the Clinic and she said yes, since all weekend she had not gone out. She also gave us a spray of Propolis to cool her throat. When we took her upstairs we noticed that she was very weak and when we laid her down to start her massages we noticed that she was very hot and we thought she had a fever, so we told her mother, but she told us that she had checked her temperature before coming and she was fine, so we decided to continue with the massages.

As we massaged her, we noticed that Victoria was not very eager to work and rarely smiled, so we massaged her a little more gently. As we put the girl down, her mom told us she would let us know how Victoria was doing.

Monday, July 24, 2017.

Victoria did not attend due to Berenice informing us that the child was feeling unwell.

6 weeks she did not show up due to family and financial issues.**Monday, September 11, 2017.**

When we went to the waiting room today we saw Berenice, we greeted her and she commented that Victoria had not been well and that she felt sad because of the problems that were presented to her, when we entered the therapeutic room, Victoria was calm when we gave her the massages, since we played songs that she liked, later we carried out the therapy of emotions and there we talked to her about how important she is and how much her relatives love her, at the end we took her to her mom and we said goodbye to both of them.

Monday, September 18, 2017

When we received Berenice we realized that she attended alone, she only told us in the waiting room that it would no longer be possible for her to attend to finish the therapy, so we ended the therapy.

Results

The progress Victoria made was significant, since at the beginning of the sessions she was very stiff in her extremities, possibly due to the operation she had, likewise the exercises we carried out with her were of great help, since we noticed that she lifted her head frequently, we also observed progress when Victoria sits up, since she holds her head, something she did not do at the beginning of the intervention.

The health personnel as well as the person in charge of the patient must work together to detect or decode the patient's needs, which turns the work into a symbolism that must be worked on and reinforced without exceptions, since it is what links us to the patient and he to us.

When studying the case we were able to observe that the massotherapy and the link with the social reinforcers tend to increase Victoria's mobility, even, by the expressions that could be observed, we assure that if there is pain in the body when moving extremities, it decreases, this undoubtedly represents an advance since it implies a better control (however minimal it may be) in the body. Massage therapy also helps to give the body the possibility to obtain greater movement in the long term, with the help of an insistent accompaniment.

Conclusion

It is important to understand the necessary participation of health personnel to be able to attend patients with motor problems, not only in cerebral palsy, likewise, the view of the mother of the case presented, and in general of the family member who is caring for the patient since they are the first link that exists, constitutes their psychological formation and their relationship with the outside world which will provide them with tools to generate autonomy.

It is important to build the patient with cerebral palsy in the social environment, we must emphasize that, socialization, the link with the outside world somehow build the subjectivity of the patient, and this helps us to have a better development for his body at the motor level.

The organic functioning although it can deteriorate the function that as therapists was emphasized and the participation at home on the part of the mother make essential to emphasize this position of the social factor and how the communication takes an important axis in the same development of the therapy, thus we enunciate that the massotherapy and the link with the work of language are a way so that the patient with paralysis has a greater development and organic control in the body.

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