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Review Article

Early Intervention and the Acquisition of Maturation Guidelines During the First Trimester of Life in Children Born in Vulnerable Situations in A Private Clinic

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Abstract

Scientific problem statement: All risk factors in the perinatal stage have been shown to have great importance as influential or conditioning factors in early evolution and development. The identification of these risk factors, in general, of the biological, social or psychological type, in the new-born, is a complex process that requires, since there is suspicion, an interdisciplinary work, since frequently the social and social risk factors Psychological are linked to the biological, in a negative feedback process. The first detection or suspicion of the existence of other risk factors, together with the Biological, usually done by professionals working in paediatrics and early care; since a new-born or infant in the first days of life expresses all its difficulties of accommodation or deficiencies throughout the body, that is why states of irritability, disorganized behaviour, sleep difficulties, feeding, etc. typical of these children, they can be warning signs of developmental difficulties, of another kind, not just maturation.

Given the characteristics outlined above, of biological and / or psycho-socio-environmental vulnerability that can directly affect and condition development in the pre-RN / RN, the following arises: On what aspects of development, inherent in this state of vulnerability, would early intervention affect, along with the necessary intervention and medical care?

Relevance and justification

Social relevance: This research work seeks to continue providing scientific tools, from the theoretical-practical approach, that facilitate the promotion of early childhood health.

The contribution of enabling tools to help improve the quality of life in relation to the maturation and development in children born c on bio-socio-psychological risk, term or preterm; as well as to expand the strategies of therapeutic intervention in the time of the new-born with particular needs inherent to the conditions of vulnerability.

Theoretical value: Regarding the aporte theoretical, is considered important crumble and analyse some of the possible impact of those psychological-socio-bio factors affecting the RN / RN pret., And analyse the effects of the early intervention as favourable strategy to improve the conditions that affect the development quality of the RN / RN pret.

Practical implications: The time of early childhood is considered a time of great value for child development, and the conditions of maturation in relation to the quality of life; This research aims to collaborate in the field of health promotion that deals with early childhood development.

Research Background: The full-term new-born child (RN) in a suitable environment shows in the first days of life and six observable behaviour states that are repeated regularly; three alert (calm alert, transient restless alert, crying alert or vi gilia), this state is very valuable as a communication system; and three of sleep (deep sleep, restless sleep and sleepiness). The best stimulation in the preterm child is that which helps the organization of states, that is, the progressive acquisition of these six well-differentiated states, considering one of the warning signs of serious developmental difficulties, disorganized behaviour in an infant, because it indicates that his nervous system has not achieved this level of maturation.

Keywords: Early Intervention; Maturation Guidelines; First Year of Life / Quarter; Neonate / Birth / Child; Vulnerability

Introduction

All risk factors in the perinatal stage, such as low birth weight due to intrauterine malnutrition, prematurity or other causes, have been shown to be of great importance as influential or conditioning factors in early evolution and development; Some can be diagnosed with new prenatal diagnostic techniques, for example. (Valle-Trapero, Mateos Mateos, Gutiez Cuevas, 2012).

A premature birth is one that occurs before the full 37 weeks of management from the first day of the woman's last menstrual period. These types of births constitute an important health problem since, although the life expectancy of these new-borns has improved considerably, morbidity constitutes an important concern for the health team. Premature infants have an important anatomical and functional immaturity, especially in the central nervous system, a fact that limits their ability to process and record sensory information and, therefore, the ability to adapt to the extrauterine environment. These characteristics make them especially sensitive and vulnerable to external stimuli. Because brain development is largely governed by sensory stimuli, it is transcendent to determine the care or interventions that not only favour the development of RN pret. but are also useful for reducing neurodevelopmental disorders. (J. Ortega Matarrita and Carolina Nuñez Cháves, 2018).

What s preterm infants (RN pret) may exhibit symptoms specific complex emerging throughout life, even in adolescence (motor subtle abnormalities, learning disabilities and behavioural problems). Some with direct consequence of lesions (intraventricular haemorrhage, hypoxia events, metabolic disorders, etc.) and others secondary to the extrauterine environment and the still immature capacity of the central nervous system (CNS) to adapt to an autonomous existence, outside the uterus. The SNC of the RN pret has a great sensitivity at the mercy of an immense sensory formation, and unable to employ protective inhibitory mechanisms related to cortical areas of greater association and differentiation.

The development of the CNS does not depend only on its own mechanism of growth and maturation; There are many other factors that act in this “critical or vulnerable” period, biological or determined by the environment. It extends from the moment of conception to several months of the first year of life. The particularity of the brain is that although it is largely genetically programmed, functional or structural changes can occur due to endo and exogenous influences: it is what is called "plasticity". (Dr. I. T. Schapira, E. Roy, MR Coritgiani, N. Aspres, A. Benítez, A. Galindo. Lic. N. Parisi, L. Acosta, 1998).

The identification of risk factors of biological, social or psychological type, in the new-born, is a complex process that requires, since there is suspicion, an interdisciplinary work, since frequently the factors of social and psychological risks are linked to the biological ones, in a negative feedback process. The first detection or suspicion of the existence of other risk factors or, together with the biological ones, usually make it health professionals (doctors and nurses) especially in the field of work, paediatrics and early care; since a new-born or infant in the first months of life expresses all its difficulties of accommodation or deficiencies throughout its body. (Valle-Trapero, Mateos Mateos, Gutiez Cuevas, 2012).

A definition of early stimulation: “a series of multidisciplinary services offered to children from birth to five years, in order to promote the health and well - being of the child, reinforce emerging skills, minimize developmental delays and remedy existing or emerging deficiencies, prevent functional impairment and promote the adaptation of parents and the functioning of the family as a whole ” [1].

Another definition of early stimulation is expressed as "a series of activities carried out directly or indirectly from the earliest age, intended to provide the widest possible opportunities integra affective action and right with half human and physical environment, with the purpose of stimulate their general development or in specific areas ". Conveniently handled, the early stimulation can produce large changes in the functioning of the brain and mental development, which are greater in the period when the brain grows more rapidly. (J. Ortega Matarrita and Carolina Nuñez Cháves, 2018).

On the definition of early intervention, one can think of "early" precocious. The sense of precociousness in relation to age or precociousness in relation to the expression of problems. Both interpretations have their positive points as negative. The greatest advantage of starting the process early in age is to take advantage of the great plasticity of the brain in the early stages of life, which will be greater during the period of breastfeeding. However, the fact is that the pathological process may never appear. Both focus it and start it as soon as it is present.

Great initial benefit, since it is only implemented in those patients who do require it, and allow to easily identify the objectives of the intervention. Against the intervention when the problems are identifiable, the process is initiated when the benefits of brain

plasticity have passed. Therefore, the tendency is to start treatment before 9 months, because it would be more effective than the one started later. (JM Prats-Viñas, 2007).

Early stimulation activities focus on four areas: motor, cognitive, linguistic and socio-emotional. Children graduated from the Neonatal Intensive Care Unit (NICU), especially extreme premature infants (weighing <1500grs) suffer from various medical complications that put them at high risk of having neurological and sensory sequelae. One of the contributions of the doctor or the early stimulation specialist for these children is to provide appropriate models and strategies for parents to participate in the early stimulation of their children. (Dr. CF Martínez Cruz, Dr. P. García-Alonso Thermann, Dr. A. Poblano, Dr. Ma. Of the A. Madlen Kuri-Noriega, 2010).

Dras. I. Shapira., *et al*. (1998) "Prospective study of premature new-borns up to 2 years. evaluation of a method of measurement of neurodevelopment". External Paediatric Office. Maternal and Child Hospital R. Sardá. Original Article MIR Sardá Hospital Magazine. Argent ina.

Summary

This is a prospective longitudinal and analytical study of the Psychomotor behaviour of 90 premature new-borns weighing 1800grs or less in the Sardá Maternity. RN prets can present complex specific symptoms, which emerge throughout life, even in adolescence (subtle motor abnormalities, learning disorders and problems with conduct).

The follow-up of children with perinatal morbidity is a discussion that is maintained throughout the years as a success in neonatal therapy vs. Survival quality The biggest differences are concentrated in the subsequent growth and development of these children.

Many children have developmental disorders and have not suffered massive insults in their neonatal period. The influences of the environment would act on brain development. To achieve an adequate development, the stimuli must be present in quantity, quality and adequate time. In RN pret, brain lesions take place in a CNS that changes and develops, so that the early diagnosis of these alterations, together with plans for timely interventions and appropriate treatments, allows for great improvements in survival and a full development of its potential.

It is difficult to infer what the final prognosis of an RN pret will be, since a number of hidden variables are played that many times have not been considered in the bibliography when analysing their neurodevelopment. There is evidence that in the Exam purposes of monitoring neurological variables related to vision, hearing, motor function and signs early cerebral palsy charged importance in terms of their prognostic value in development in the early years of life and would be in direct relation with biological causes.

Detecting when and how the macro and microenvironmental and sensory perinatal factors began to influence is one of the purposes of the preterm birth monitoring program. These contributions, together with the conception that interventions should accompany the course of the maturation of the CNS, respecting its stages, suggest that the priority is focused on the periodic and systematic monitoring of the neurobiological development of RN pret, which in turn will allow to know its behaviour in order to improve the contents and the quality of care. Subtle or moderate neuropsychological problems related to intellectual level, memory, attention lability, language and communication, psychomotor disorders, learning difficulties, and behaviour problems are late onset, become more pronounced as children grow up and would be linked to environmental causes.

By detecting disorders in the different areas of development early, it allows implementing timely and adequate intervention plans, facilitating and favouring the family bond, since the parents and the rest of the family actively interact with the child; and / or derive timely and early if necessary.

- Dras. M. Valle Trapero, R. Mateos Mateos, P. Gutiez Cuevas. (2012). "Children at high risk at birth: Prevention aspects. Early Neonatal Care and Follow-up Programs in premature children." Official College of Psychologists of Madrid. Publication Educational Psychology Vol. 18. No. 2. Spain.

Summary

Prematurity leads to a large number of cases, difficulties and developmental disorders of the child Different studies reflect a greater pathology, both in neurodevelopmental disorders and in alterations of the bond, or other factors such as: food, sleep, emotional behaviour and adaptation problems is collar. The importance of carrying out a correct evaluation and therapy,

if necessary, of the development of the link, the ecology of prematurity and neuropsychological evaluation from birth to 6-7 years is indicated. The importance of knowing the neuropsychology of biohazard children and the need to train professionals from a perspective is also explained.

Multi professional

From our experience, in the early care and follow-up programs, for all children who have presented biological risk factors in the perinatal stage, we attach great importance to the establishment and consolidation of a series of maturation milestones, capacities, functions and acquisitions because we know that are predictors and organizers of good development and especially because they are not easy to acquire or consolidate these populations, because of the existence of other factors as mentioned suffering and interfere in a significant way the whole process d e developing.

Maturing milestones indicators of good development:

1. The type of emotional bonding.
2. The organization of state of the RN and the infant.
3. A harmonic psychomotor development, according to its biological age
4. Well- established maturation stages.

- JO Matarrita and CN Chávez. (2018) "Early stimulation strategies within neonatology units for preterm infants". University of Costa Rica Electronic magazine. Special Ed. No. 1. Costa Rica Recovered from: https://revistas.ucr.ac.cr/index.php/enfermeria/article/view/32273

Summary

The neonatology services-NICU-are the first contact of the newly born at birth, where it is subjected to multiple environmental stimuli that interfere with its development. The objective of this study is to analyse the best available scientific evidence regarding the early stimulation strategies applied by nursing to hospitalized new-borns, which have been useful to reduce or avoid mild or severe alterations in neurodevelopment.

During the last twenty years, the great advances in the care of high-risk new-borns allowed the final result, in most of the complex neonatal problems, to be more favourable, even when survival rates have improved, even In the most immature children, such a population remains vulnerable in terms of severe morbidity and disadvantages in long-term neurodevelopment.

Linked to the concept of early stimulation, it is necessary to refer to the embryonic and fatal stage during which the bases of the development of the nervous system are established; in the research that is carried out about early stimulation in paediatric nursing and the role of the occupational therapist, whose objective was to characterize the intervention of occupational therapy for the early stimulation of the development of children from 0 to 2 years of age, taking into account The context of hospitalization. As a result, it is highlighted that the paediatric nurse develops activities when the mother or caregiver is present and initiates contact with the baby, through the conversation before touching it, to establish or resume the therapeutic bond or reassure it, while observing their responses Physiological and behavioural. Vestibular stimulation and therapeutic touch are favoured. As conclusions it is determined that early stimulation can be considered an ideal method of care for hospitalized babies with risk of developmental delay, which depends not only on the occupational therapist but also on other professionals of the multidisciplinary team that also accompanies the child. In addition, he mentions that the role of the occupational therapist in paediatric nursing is to identify the conditions, emotional state and behaviour of children, without forgetting their physical limitations, as well as providing adequate stimuli for their development during and after their hospitalization.

Because the development of the brain is largely governed by sensory stimuli, it is important to determine the care or interventions that not only favour the development of the preterm neonate, but are also useful for reducing neurodevelopmental disorders.

- JM Prats-Viñas. (2007). "A for the early detection and moderate interventionism: to what extent is effective the early stimulation?". Neuropediatric Unit Hospital de Cruces. Biscay. Spain. Article Magazine of Neurology. Summary : Review of the results obtained from the stimulated early ion in children of risk and in other affections of known dysfunctions, to which diverse techniques are applied, whose theoretical bases, intervention programs and time of application are heterogeneous, and that vary from early stages (neonatal intensive care unit) to later stages of developing.

Early stimulation is understood as a series of multidisciplinary services offered to children from birth to 5 years, in order to promote the health and well-being of the infant, reinforce

emerging skills, minimize developmental delays and remedy deficiencies existing or emerging, prevent functional deterioration and promote the adaptation of parents and the functioning of the family as a whole. Finally, it should be noted that in the most recent work on neurocognitive development of children born with low weight, the improvements were attributed to physical data, such as the lower occurrence of severe abnormalities on ultrasound, the decrease in the incidence of neonatal sepsis and the lower use of steroid corticosteroid, without mentioning the influence of early stimulation in this population.

- Dr. CF Martínez Cruz, Dr. P. García-Alonso Thermann, Dr. A. Poblano, Dr. Ma. Of the A. Madlen Kuri-Noriega. (2010). "Early stimulation of hearing and language for children at high risk of neurological sequelae." Paediatric Act of Mexico, volume 31, number 6.

Summary

The objective of this work is to expose the measures used by the service of Medicine of Human Communication in the Department of Paediatric Follow-up of the National Institute of Perinatology in children at high risk of neurological sequelae, with a metrolingual, auditory and vestibular approach during the prelinguistic period (0 to 12 months).

Early stimulation in hearing and language is the strategy that favours the skills that allow the child to communicate with their environment; It includes the comprehensive, expressive, integrative and gestural capacity. The child's auditory function is the main route for language learning; This is a superior cortical function exclusive to man, by means of which a message is encoded or decoded. Children graduated from the neonatal Intensive Care Units are at high risk of suffering sensory and neurological sequelae.

Early stimulation is a therapeutic-educational discipline for children from 0 to 3 years of age, with disabilities or at biopsychosocial risk of presenting it. Early stimulation is a paediatric project of longitudinal follow-up that requires effort and perseverance; It is based on a series of programmed selective stimuli that promote a natural or physiological learning in the child in order to favour its optimal neurodevelopment. Early stimulation activities focus on four areas: motor, cognitive, linguistic and socio-emotional. Early stimulation in hearing and language is based on strategies that favour the skills that will allow the child to communicate with their environment.

They cover the capacity d comprehensive, expressive, integrative and gestural, considering that the child's auditory function is the main access route for language learning. Measures used by early stimulation, hearing and language of the Department of Pediatric Follow-up of the National Institute of Perinatology in children at high risk of neurological sequelae, with a neurolinguistic auditory and vestibular approach in the prelinguistic (0 to 12 months) and linguistic periods are described early (12 to 36 months).

Theoretical framework

The intention to describe the evolution of a child in terms of balance that, from the mental point of view, is a continuous construction.

The psychic development that begins with birth, and ends in adulthood is comparable to organic development: it consists essentially of a march towards balance. Development is, in a sense, a progressive equilibrium, a continuous step from a less balanced state to a higher state of equilibrium. The final form of equilibrium achieved by organic growth is more static than that towards which mental development tends. Certain psychic functions, which depend closely on the state of the organs, follow an analogous curve, for example: visual acuity reaches a ceiling towards the end of childhood; conversely, higher functions tend toward "a mobile equilibrium," the more stable the more mobile it is.

From the functional point of view, there are constant functions common to all ages: at all levels of action it is always an interest that triggers it (the need is presented as a question or a problem). Together with the constant functions we must distinguish the variable structures and it is precisely the analysis of these progressive structures or successive forms of equilibrium, which indicates the differences or oppositions of a level to level of behaviour, from the elementary behaviours of the new-born to adolescence.

The variable structures will be, by both the forms of organization of mental activity, under its dual motor or intellectual aspect, on the one hand and affective on the other, as well as its two dimensions, individual and social. For a better understanding we will distinguish six stages or periods of development, which indicate the appearance of successively constructed structures. (J. Piaget, p.11-13).

In this work the first stages that, by themselves, will be the beginning of the infant period will be considered.

1st. Stage of hereditary reflexes or adjustments, as well as the first instinctive tendencies and the first emotions.

2nd. Stage of motor customs and the first organized perceptions, as well as the first differentiated feelings.

Each of these stages is characterized by the appearance of original structures, whose construction distinguishes it from the previous stages. Each stage also corresponds to some momentary or secondary characters that are modified by further development based on the needs of a better organization. Each stage therefore constitutes, through the structures that define it, a particular form of equilibrium, and mental evolution takes place in the sense of an increasingly better equilibrium.

The functional mechanisms common to all stages: every action (movement, thought, feeling) responds to a need. Considering the need as a manifestation of an imbalance: there is a need when something has changed and it is about readjusting the behaviour based on that change. It could be said that, at every moment, the action is unbalanced by the transformations that arise in the world, inside or outside, and with new behaviour consists not only in restoring the balance, but also in tending towards a more stable equilibrium than the one prior to the disturbance.

Human action in this continuous and perpetual adjustment mechanism and equilibration, and that is why, in its phases of initial construction may be considered to successive mental structures that engender development as so many of balance of each of the which has progressed in relation to the previous ones. But it must be understood that it is like mechanism functional, generally that is, not explain the content or the structure of the different needs; The child tends to complement them in the sense of a better balance. It can be said that, in general terms, every need tends:

- To incorporate things and people into the subject's own activity, and therefore to "assimilate" the outside world to already built structures.
- To readjust these based on the transformations experienced, and therefore "accommodate" them to external objects [2].

From this point of view, all mental life, as well as organic life itself, tends to progressively assimilate the environment, and carries out this incorporation through structures, or psychic organs, whose radius of action is more or less extensive : the perception and the elementary movements give first access to the near objects and in their momentary state, and later the memory and the practical intelligence simultaneously allow to reconstruct their previous state and anticipate their next transformations.

By assimilating objects in this way, both action and thought, they are forced to accommodate themselves. It can be called adaptation to the balance of these assimilations and accommodations: this is the general form of psychic equilibrium and mental development then appears, in its progressive organization, as an ever more precise adaptation to reality. And it is the stages of this adaptation that we are going to develop.

The period that extends between birth and language acquisition is marked by extraordinary mental development. This period consists of a conquest through perceptions and movements, of the entire practical universe surrounding the child. This sensory-motor assimilation of the immediate outside world, in the new-born, finds the starting point of development by referring everything to itself, or more specifically to its own body.

Three phases can be distinguished between the origin and the end of this period:

1. The reflexes: Sensory and motor coordination all of them hereditary adjusted and corresponding to instinctive tendencies. Ex: food. Then these reflexes lead to discriminations or practical recognitions difficult to discern.
2. The organization of perceptions and habits: Different exercises reflexes are complaisant by the integration into habits and perceptions organized, acquired with the help of the experience.
3. That of the sensory-motor intelligence itself: [2] Here it is only mentioned, although it would not be treated in this work.

Within this theoretical context, it is worthwhile to enrich it by incorporating the theoretical concepts proposed by Dr. Lydia Coriat, who starts from the statement made by J. Ponces Vergè and J. Aguilar Matas "More than talk about motor development we must talk about development of psychomotor skills, a term that best defines the maturational reality of the child. The psychomotor development, undifferentiated process of the global development of the nervous system, involves the acquisition of a set of more

differentiated motor functions that allows the adult to omit with more property motor functions ". (Dr. L. Coriat, Introduction, pV).

The term "maturation" theoretical evidence and ethical positioning of Dr. Coriat. The choice of this term gives recognition of the specific cutouta professional look while while avoiding complexity of the subjective cultural familiy issues, that are woven into each child's story. Dr. Alfredo Jerusalinsky, collaborator with Dr. cites that it talks about development interrogating other disciplines, and raising some hypotheses about how they will weave the neurological maturation and the possibilities it offers, yet it surrounding the baby from birth. 1976 coined the concept of "neuronal flexibility" in the same direction as later to be the neuroplasticity. In the clinic it showed what it over later the neurobiology confirmed: the maturational processes partially marked by a genetic clock, depend on its rhythm and configuration of the functional matrix environment that will impose.

The experience that the child has with his own body during early childhood does not only come from his archaic automatisms but also from three other structuring sources. The development thus conceived does not consist in the passive waiting of the moments marked on the genetic clock, but as a work of conquest and transformation through the singular subjectivation of the organism. (Dr. L. Coriat, Introduction, p. X II-XVII).

We will consider the neurological bases of psychomotor maturation - based on the theoretical concepts that Dr. Coriat raises:

Muscle tone

A state of permanent tension of the muscles, of reflex, variable origin, whose fundamental mission tends to adjust local postures and general activity, and within which it is possible to distinguish semi logically different properties. It is an activity governed by the central nervous system. Accurate assessment of muscle tone requires the support of objective data. This assessment is important because the quality of muscle function seems to play a vital role for both the current neurological state of infant as in the future integrity of all the neurobiological function [3].

Coordination of reflexes

These are automatic reactions triggered by stimuli that impress various receptors. They tend to favour the adaptation of the individual to the environment. Rooted in the phylogeny accompany the human being during the first age, some throughout life. As the maturation of the nervous system progresses, the stimuli that trigger reflexes cause less automatic responses; In the shadow of archaic reflexes, drawing on the experience acquired by exercising them, voluntary psychomotor activity develops [3].

The first trimester infant

The behaviour of the first trimester infant is governed by archaic reflexes. This is one of its fundamental characteristics, it becomes very evident in its postural activities.

They have no purpose if we understand the appropriate response of a motivation as such, they are far from disorderly movements: they have a frank tendency to obey the asymmetric tonic changes of the neck muscles and the flexor and abductor impulses of which the infant is gifted. They are important in the process of adaptation and learning. In this evolutionary process, it characterizes within the first trimester, child maturation:

- Cephalic location in relation to the midline. Orientation changes of the head during the first month of life.
- Sensory stimuli that cause reflex responses.
- Asymmetrical position of the head produces postural asymmetry of the limbs.
- Clenched fist, thumbs oppose outside the other fingers.
- Trunk independent of the head.

When the child is in his third month of life (older than two months, younger than three), he achieves tonic-postural features, establishing the child's visual, auditory and emotional communication with the environment. Silence of some archaic reflexes [3].

The birth of a child is an event of vital importance, but when an imponderable event occurs and that new-born child must face the difficulty of surviving, in principle going through and transcending these circumstances, in order to then begin the process of maturation and development. It is in these situations that the baby needs care and help from doctors and nurses, therefore it is in a special place: the Neonatological Intensive Care Unit (NICU).

In the NICU there are monitoring equipment, incubators, respirators, among other complexity equipment. The sound of alarms, voices of different professionals (doctors, nurses, specialists, parents, etc.), lights, temperature is frequent.

It is necessary to consider some definitions on what to consider about a baby born in a state of biological vulnerability:

Gestational age: the weeks elapsed between the first day of the date of the last menstruation and the day of the child's birth.

- New born at term: birth occurs between 37 and 41 weeks of gestational age.
- Preterm new born: Birth occurs before the age of 37 weeks of gestational age.
- New born underweight: birth weight is less than 2500grs.
- New born of very low weight: the birth weight is less than 1500grs.
- New born of extreme low weight: birth weight is less than 1000grs.
- New born of low weight for his gestational age: the birth weight is less than his due for his gestational age.

The situations, most often faced by a baby born in a state of biological vulnerability, are:

- Thermoregulation: difficulty maintaining its own temperature.
- Weight reduction: The feed is difficult, usually resolved by the power "parenteral" (probes or via intravenous).
- Respiratory distress syndrome: Depending on the conditions, babies may have immature, sick or malformed lungs. They have not completed their development.
- Arterial ductus: Vascular duct between the main arteries, Aorta and Pulmonary.
- At birth this duct must be closed, its objective is to change blood circulation / oxygenation.
- Apneas: Stopping the breathing occurs immaturity of the central nervous system.
- Jaundice: A pigment, called bilirubin, increases by immaturity of the liver.
- Infections: Imperfection or immaturity of the immune system, compromised host.
- Retinopathy of prematurity: The blood vessels that the retina needs have not yet reached the periphery, they may find it difficult to do so, in parallel the oxygen management must be controlled.
- Bronchopulmonary dysplasia: As a result not desired the intensity of the respiratory mechanics.
- It is disturbing, emotionally, when the birth of a baby is accompanied by difficulties.
- The ideal family is shaken to the uncertainty. Crisis. Stress (Dr. M. Larguía, p. 27-30).
- Now, in what terms do the principle of "vulnerability" lie?.

Neonates are vulnerable, understanding that they are at the beginning of life, as long as their biological body and their psychic-social constitution have just begun their vital journey, the vulnerability of the human being manifests itself in three planes: In the first place, the fragility of staying alive: vital vulnerability; secondly, subsistence vulnerability, referred to the difficulties of securing the biological elements necessary to maintain and develop; third, the existential vulnerability, including social vulnerability, which are the avatars that threaten the continuation of the life project that each one pursues [4].

"The description of vulnerability is considered as a description of personal integrity. The corporeally embodied human being is seen as vulnerable in the sense of being able to be damaged, subjected to risks and threats against his integrity. [...] Certainly, the characteristic of temporality and finitude of human life indicates that the human condition is very fragile. Vulnerability means that we must live with mortality." [1].

Is it possible to delineate some thought in the face of any state of vulnerability of a human being? Can you anticipate possible consequences?

The definition of the World Health Organization on "What is the promotion of health?" Is interesting and, in this sense, it would be very useful to bring it closer to the deployment of this work.

"Health promotion allows people to have greater control of their own health. It covers a wide range of social and environmental interventions aimed at benefiting and protecting individual health and quality of life through the prevention and solution of primary causes of health problems, and not focusing solely on treatment and cure.

Health promotion has three essential components:

1. Good health governance: priority to the policies that prevent the people from getting sick or injured.
2. Health education: People must acquire knowledge, skills and information that allow them to choose healthy options.
3. Healthy Cities: Contribution to the community health [5].

The gestational environment can impact the structure and functioning of the fetal brain and increase long-term susceptibility to neurodevelopment and neuropsychiatric disorder. It can occur independently or in conjunction with genetic or postnatal factors. For severe reasons, the environment influences fetal development, especially in the brain: 1- Gestation is when the greatest differentiation of brain structures occurs. 2- The development of the brain involves a cascade of interactions with the environment. 3- The immature blood-brain barrier offers limited protection against neurological injury. For these reasons, brain plasticity, during pregnancy, confers greater vulnerability to environmental exposures and opportunities for therapeutic interventions.

The structure and functional connectivity arise over the first two years of life. In childhood, the brain grows in size and production of synaptic connections as well as in myelination, this plasticity allows the development of a brain according to individual needs.

Although the first year of life represents a period of greater vulnerability for development, it could also be the time when, different therapeutic interventions, give the best benefit. The interventions provide childhood with a enrichment on the environment throughout the age of psychomotor appropriation, attention and cognitive training. Research suggests substantial potential for reversal of effects. negatives of prenatal stress, evidently suggesting a postnatal compensation for prenatal adversity.

Not all children are sensitive to the environment in an equivalent manner, and the degree of postnatal plasticity may be the result of genetic composition and the intrauterine environment. Research shows impressive results when the intervention focuses particularly on the vulnerable population. They have also shown that the quality of prenatal and postnatal development can influence the brain development of both the fetus and the child, with consequences on mental health throughout their lives [6].

The defenceless patients assisted in hospital are especially term infants and especially premature very low weight assisted in the NICU. These patients are vulnerable because of its small size and weight, as by the immaturity of all organs and systems, and its total dependence on the caregiver without being able to point or alert mode some as us caregivers that something goes wrong (eg pain). Therefore, in the NICUs, the systematic collection of effective information that creates a culture of safety in the participating units may be the source of subsequent multicentre collaborative studies.

The care and safety of the neonatal patient should be a priority for health systems due to the serious family, social, individual and economic implications related to premature birth. Preterm birth rates have increased in the last three decades. Simultaneously, the development and the application of advanced technologies support and monitoring and a greater understanding of the basic physiology of the new-born have led to a decline in the infant mortality and the improvement in the quality of life of survivors. This prevents some of these patients from suffering brain or other organ damage that causes long- term disabilities. Very low birth weight infants, especially premature infants under 1500grs., Have high mortality and morbidity rates, conditioned by their great vulnerability and the immaturity of their organs and systems (Ministry of Health, social services and equality [7].

Within this context, and as a scientific attempt to promote the promotion of health to this vulnerable and susceptible population to suffer sequelae in its longitudinally quantifiable development, Early Care is understood as a set of interventions, aimed at children from 0 to 6 years, to the family, and the environment, which aim to respond as soon as possible to the temporary or permanent needs presented by children with developmental disorders or who are at risk of suffering from it. These interventions, which should consider the globality of the child, must be planned by a team of interdisciplinary or transdisciplinary guidance professionals.

The nervous system is in early childhood in a stage of maturation and important plasticity. The situation of maturation conditions a greater vulnerability to adverse environmental conditions and aggressions, so any cause that causes an alteration in the normal acquisition of the milestones that are characteristic of the first evolutionary stages can jeopardize development harmonic

posterior, but plasticity also gives the Nervous System a greater capacity for recovery and organic and functional reorganization [8].

Hypothesis

"Early intervention favours the acquisition of maturation guidelines during the first trimester of life in children born in vulnerable situations in a private clinic".

General objective

To analyse the effects of early intervention for the acquisition of maturation guidelines during the first trimester of life in RN / RN pret. In a situation of vulnerability, born in Monte Grande Private Clinic, admitted to the Neonatological Intensive Care Unit and with post-high control in paediatric offices of the same institution.

Specific objectives

- Determine conditions of vulnerability status in the term and preterm infant.
- Identify status of functions prior to the acquisition of maturational guidelines in infants admitted to the NICU.
- Record the process of early intervention and evolution.
- Identify and record maturational conditions achieved and not achieved at the time of discharge from the clinicin NICU.
- Assess maturation guidelines related to the first trimester of a baby's life.

Method

Considering the characteristics of the population that is considered to be studied, as well as the need to evaluate comparative results, this research project is proposed as quasi-experimental, pre / post facto with a control group [9-11].

In the mixed approach, both qualitative and quantitative approaches can be used to answer different research questions about a problem statement; It offers several advantages: it achieves a more precise perspective of the phenomenon, it helps to clarify the problem statement, the multiplicity of observations produces richer and more varied data, theoretical creativity is enhanced with critical assessment procedures. It is proposed to quantify qualitative data and generate one type of data with analysis of the other approach.

The theory is a frame of reference, it is constructed from the empirical data obtained and analysed, representative for its qualities. It is considered important to analyze the facts among themselves to discover a reality, taking the behaviours-responses of the neonates in their different reflex-sensory-motor manifestations.

Due to the need to weigh and analyze certain characteristics raised in the hypothesis, to be able to compare and analyze the differences, one thinks of administering a pre-test and a post-test in two groups. The administration of evidence is controlled: one group receives the experimental treatment at the beginning and at the end of the experiment, and another does not (control group); what influences one group must influence the other in the same way to maintain equivalence between them.

This research work will be carried out in a private clinic, located geographically in the town of Monte Grande belonging to the Buenos Aires suburbs. The pre-test will be administered in the Intensive Neonatal Care Unit (NICU) and the post-test in the pediatric external offices of the same. The control group with the same modality.

The universe of births in this clinic, during the year 2018, was 1659 babies. The population that received special care at the NICU in the same year was 436 children out of the total number of those born. A random sample of two groups of 25 infants will be taken for each one, at the convenience of this work to be able to quantify and analyze the data in order to verify the hypothesis proposed. They will be considered term or preterm infants admitted to the NICU for presenting bio, socio, psychological and the need for special care.

The follow-up group will maintain daily early intervention care while they remain in the NICU, and two weekly sessions, on an outpatient basis in the pediatric service.

consulting room, with those infants who have been discharged; taking the term of 3/4 month after the date of birth as the post-due period.

The information obtained from Documents (Clinical histories / Epicrisis), Direct observation and annotations will be used as data collection instrument.

As variables to be quantified, the following will be taken:

In relation to the child at the time of birth:

- **Gestational time:** at term (38-40 weeks of gestation), preterm from 25 to 37 weeks of gestation, extreme risk (less than 25 weeks of gestation).
- **Weight:** More than 2500grs., Between 1600 and 2500grs., Less than 1600grs. Childbirth: Natur al, Cesárea, Urgencia.

Regarding the weighting factors in the child:

- **Prenatal factors:** Maternal conditions, Embryonic development (malformation), Genetic origin.
- **Perinatal factors:** Respiratory aspects, Infectious aspects, Haematological aspects, Nutritional aspects, Cardiovascular aspects.
- **Potal factors:** Apnea, Convulsions, Sepsis, Bone trauma, Neurological Injuria.

Qualitative variables

For both groups, two-time tests will be taken. The perfect time between 0 and 1 month of the date of birth, and the post fact of the 3 to 4 month of the date of birth. The variables to be considered will be taken during the observation record and will be classified by the characteristics of the response: Typical / Normal, Slight delay / atypical components and Atypical / pathological / not achieved.

In relation to development

Response to sensory input: automatic response, organized response (silenced archaic reflex), response to visual stimuli, sound stimuli, proprioceptive stimuli. Muscle tone: hypertonia, hypotonia, tone balance.

Motor organization: head-midline location, head-trunk independence, fist closure.

Analysis of data

The graphs show different aspects that were taken in relation to the sample. The main criterion is to be able to make a comparison between the follow-up group, on which an early approach was intervened, and the control group on which only the same data were taken comparatively. Each group was randomly formed by twenty-five infants with similar characteristics in order to reduce possible variations.

Some criteria were developed with standardized values that underlie the assessment of the birth and development of a newborn during the first trimester of life and its possible condition of vulnerability. Among the characteristics at birth, ten births with sex or female and fifteen with male sex were recorded in the follow-up group; In the control group thirteen born with female sex and twelve male, so sex will not be considered relevant.

Characteristics of the baby at birth.

Gestational time

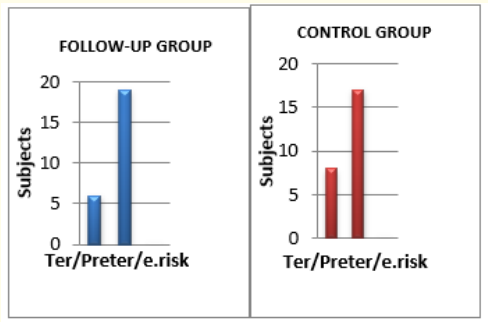


Figure 1

Understanding gestational time as: term (38 - 40 weeks gestation). Preterm (25 - 37 weeks gestation). Extreme risk (less than 25 weeks gestation). Observing the similarity of both groups in this aspect and the bulk of both groups would be located in the preterm infants.

Weight

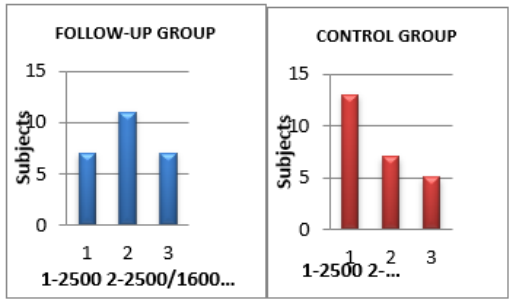


Figure 2

The measures of weight that are considered to assess their vulnerability status are: greater than 2500grs., Between 1600 and 2500grs., Less than 1600grs. In both groups, differences are seen, observing that the group that receives early care at birth is in a relative situation of vulnerability with respect to weight, the same does not occur with the control group. One might ask if, given that this second group has a better weight and this is an important condition at birth, the medical criterion is that they would not need the

Early intervention regarding this point.

Birth

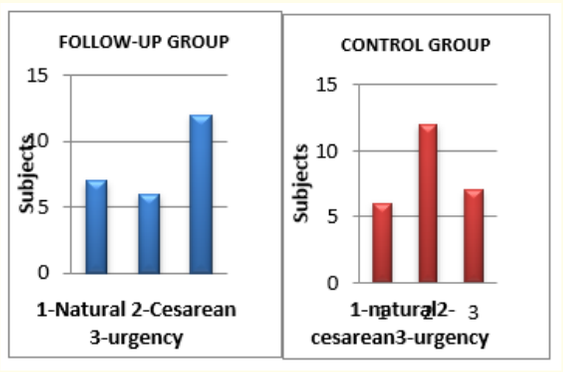


Figure 3

The context and the situation of childbirth would condition the first state of the new-born at birth. Taking at birth by natural birth, by caesarean section and by urgency; understanding maternal and child stress at birth and its possible impact. In a new comparison, the group that is referred for early attention seems to be in direct association with that condition.

Factors inherent to the times related to the birth, the previous and the subsequent one to the same.

Prenatal factors

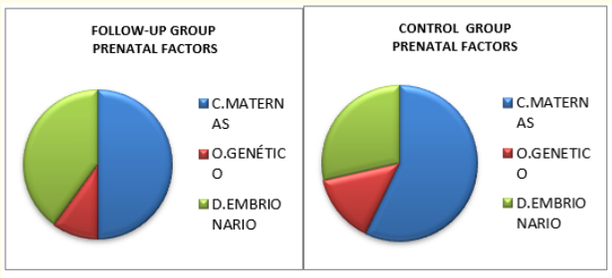


Figure 4

The characteristics of the neonate depend on the gene / environment interaction, therefore its embryonic development (prenatal factors) will be considered, in this study, broken down into maternal conditions, genetic origin and embryonic development.

Comparatively there are almost no differences between the two groups.

It should be mentioned that, in this population of fifty new-borns, a minimum proportion of children who have features associated with a problem of genetic origin or malformation during embryonic development were observed; In addition, it should be noted that the highest proportion of maternal conditions presented was hypertension and / or gestational diabetes.

Perinatal factors

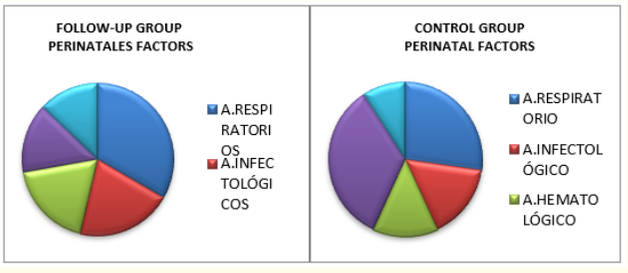


Figure 5

Perinatal factors were considered, for this study, respiratory aspects, infectious aspects, haematological aspects, nutritional aspects and cardiovascular aspects; comparing some similarity in both groups. The relevant aspects are respiratory and nutritional; taking the differences between both, in the first group the respiratory aspects stand out and in the second the nutritional ones. Perhaps it could be observed that, as regards the medical referral for the approach of early stimulation, the effect caused by respiratory aspects as an alteration has a more immediate consequence than the nutritional ones, which, as a consequence, can be seen in the medium term. Within the nutritional aspects, the majority of the infants of both groups, presented difficulties in achieving suction, feeding by their own means with a breast or a breast, using a probe at first. They also presented difficulties in both aspects (respiratory and nutritional) as if they had a direct relationship (Figure 6).

The postnatal factors considered in this study are: apneas, seizures, sepsis, bone trauma and neurological injury. In the sample taken from both groups there is a direct relationship between some

of these factors, almost similar only in some of these neonates, for example: apnea-seizure-neurological injury, sepsis-seizure, neurological insult-seizure. In case of bone trauma it is the same diagnosis: clavicle fracture-obstetric paralysis.

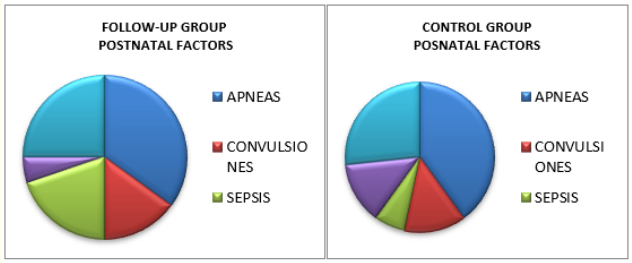


Figure 6

Initial evaluation both groups

General answers

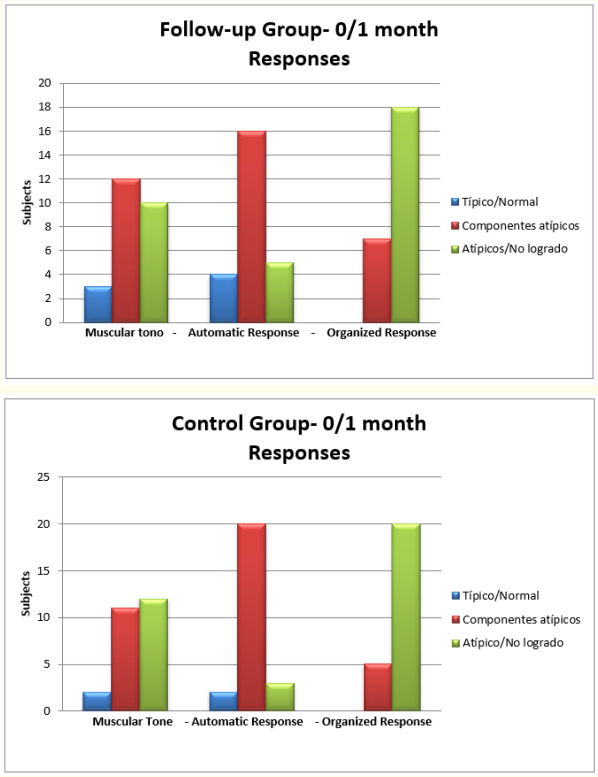


Figure 7

In relation to general responses, muscle tone, automatic responses are considered, understanding these as archaic reflexes (main activity in a new-born) and organized response as the first outline of sensory-motor exchange with the environment. The measurement parameters are in relation to the expected characteristics of these responses: typical, with atypical or atypical component.

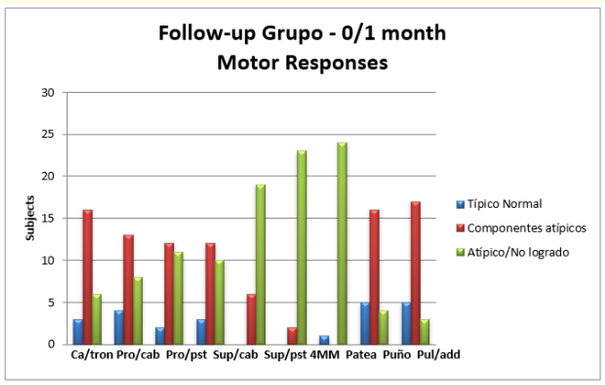
In the comparison of both groups it is notorious that both muscle tone, automatic responses and organized responses depart from the typical or expected for a neonate, evidencing the characteristics of vulnerability in the neonates of both groups to begin their maturation process. Regarding automatic responses and organized responses, there was a notable inhibition and / or disorganization in general of the fifty children in the sample.

Motor responses

The first motor responses give an account of the starting point with respect to the maturation of each new-born; they have a posture-tone relationship, cephalo-caudal maturation and archaic reflexes present, which were considered as evaluation items: head-to-head alignment, in pronation of the head position and in pronation the organization of the posture of the new-born, in supine the position of the head, supine the organization of the posture of the new-born and supine the organization of the four members in relation to the midline and the trunk, the kicked, the position of the hand in fist, the position of the thumb in relation to the fist.

The measurement criterion is repeated in relation to the expected characteristics of these responses: typical, with atypical or atypical component.

Significantly, in the observation of these limited responses to a certain stipulated guideline, the condition of vulnerability of these new-borns would be evidenced regardless of in which group their observation was contemplated. The atypical components or directly the atypical response predominate in all responses, being the alignment of segments, in the first place, and the organization of the position of the RN supine with four aligned members, the most difficult responses.



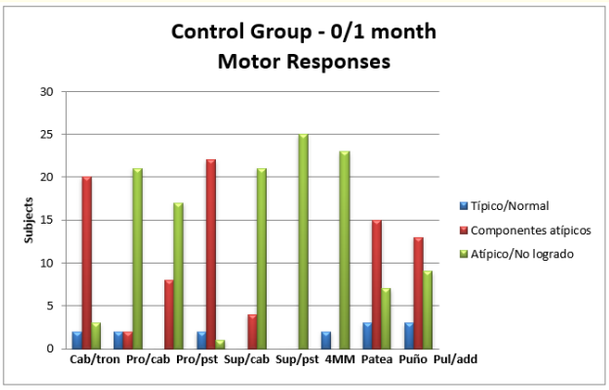
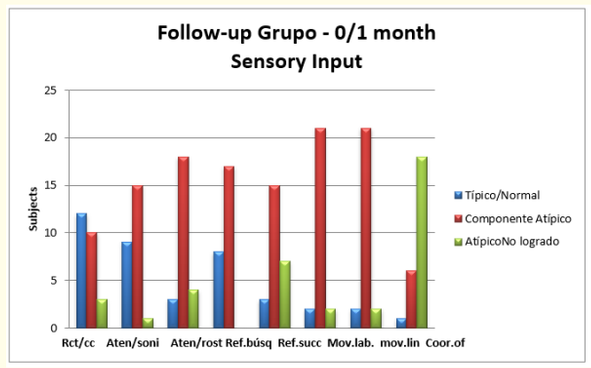


Figure 8

Response to the sensory input



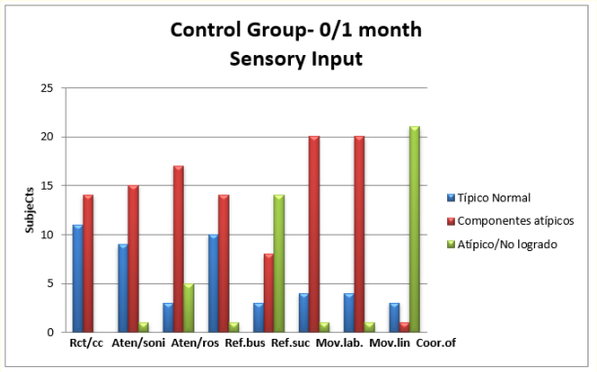


Figure 9

Another concept that determines its starting point with respect to the maturation of each new-born would be based on the first responses are from the sensory input, understanding that it is first perceived and then answered. Thus, as an observation variable, it was considered: the reaction to body contact, search and suction reflexes (proprioception); Orofacial movements: labial, lingual and its coordination for suction (proprioception, smell and taste), attentive to sound (auditory), attentive to the face (visual). Once more observed the vulnerability of infants in this study in relation to what is expected maturation ally; similar in both groups, the greatest difficulty would be in relation to the coordination of orofacial movements to the suction.

Final evaluations (post facto)

The fourth month of chronological age is taken with the purpose of completing the first trimester of maturation of a new-born. Significant differences are observed between the follow-up group that received early care treatment for three months on a daily basis and the control group with which only one observation was made at the first moment after birth and a second observation at the fourth month of lifetime.

General answers

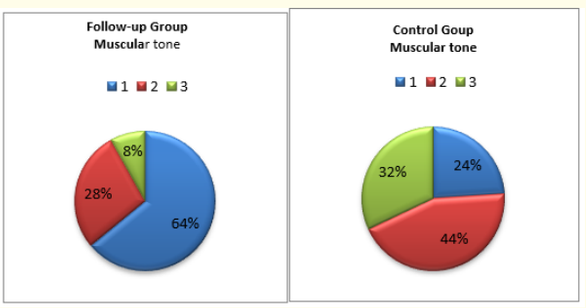


Figure 10

Muscular tone

The new-born begins its process of maturation in a horizontal position needing balance in muscle tone to resolve its motor behaviours against the effect of gravity. The early approach would facilitate this achievement by being evident in the comparison of both groups although, however, the first group maintains atypical components at the time of the second evaluation.

Organized responses

The organized responses, at the end of the first trimester, are related to the first indications of sensorimotor organization and the inhibition of archaic reflexes. Although the group that received early attention has atypical components in its responses, it has achieved 32% of typical responses and reduced atypical ones compared to the control group that, did not achieve their adaptation, remaining with a high rate of guidelines not reached.

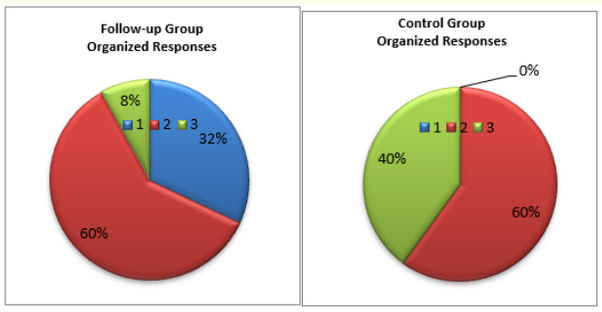


Figure 11

Motor responses

Cephalic control

Motor maturation is cephalo-caudal, therefore cephalic control is the first significant milestone in maturation. The organization of the ventral and dorsal decubitus posture is in relation to the head-trunk alignment. The movement, as secondary to the posture, begins with the turn of the head both sides. A considerable reference is made evidence on the effect of early intervention in this aspect, comparing both groups, being an important contrast between the responses of the typical of the monitoring group and the atypical of the control group; The responses with atypical component reduced a minimum percentage in both groups.

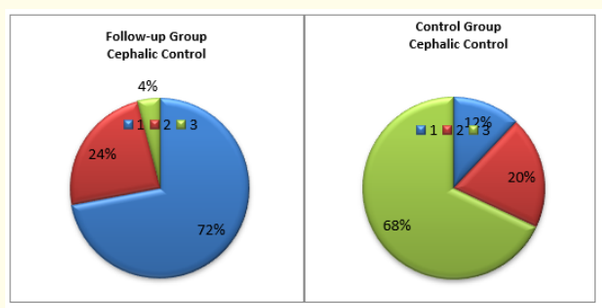


Figure 12

Posture and movement

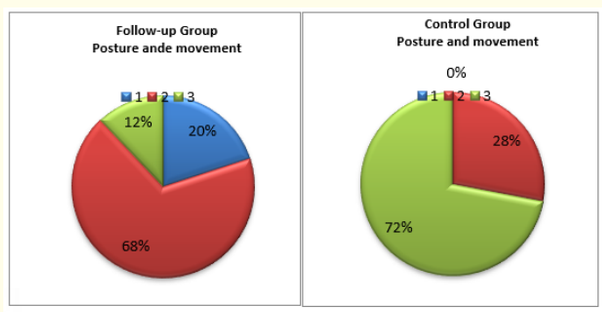


Figure 13

The pattern most important maturational driving this quarter is the movement against the effect of the gravity: drive sitting and movement of the four members online media; both movements inevitably include the organization of synergies semi complex with the proprioceptive integration, visual and vestibular to the same time. Might be interpreted, 68 percent of the responses with atypical components group tracking unlike 72 percent of the atypical responses gr upon control as a point considerably favouring the early intervention in this regard.

Hand position

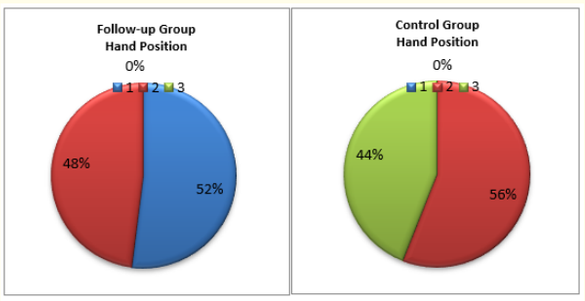


Figure 14

The hand has particular characteristics with respect to general motor maturation and with respect to the particular maturation of sensorimotor intelligence in the near future. In this study, in relation to the maturation of the hand, it is observed: open and close the hand, look at the hand, bring the hand to the mouth, hand-object contact. Both the position of the hand, and its movements and, in relation to the initial responses of the hand (at birth), there would be a significant maturational modification associated with early intervention.

Hand movements

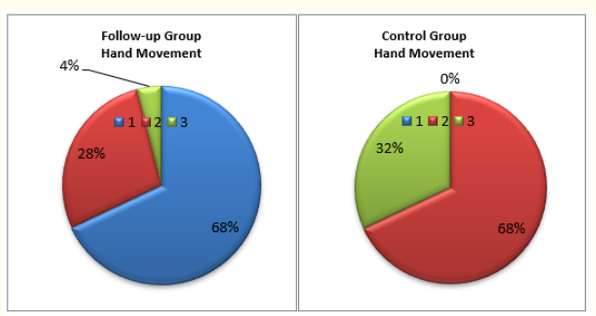


Figure 15

Answers to the sensory input

At the end of the first trimester, the motor sensory response begins to integrate maturation as a process of interaction with the environment.

Sound response

There are two significant behaviours: look for the sound source and turn when they speak to you. Both groups show good evolution, although the group that received early intervention minimizes atypical behaviours and the control group only 52 percent achieves expected or typical responses.

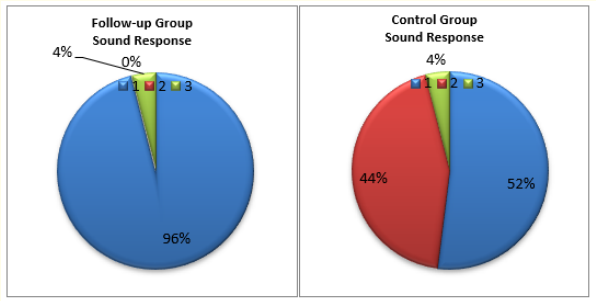


Figure 16

Look response

Also this sensory response shows the same evidence that the response the sound, the group receiving early intervention reduced to the minimum the atypical responses and the control group only 48 percent (the middle) reaches the expected responses.

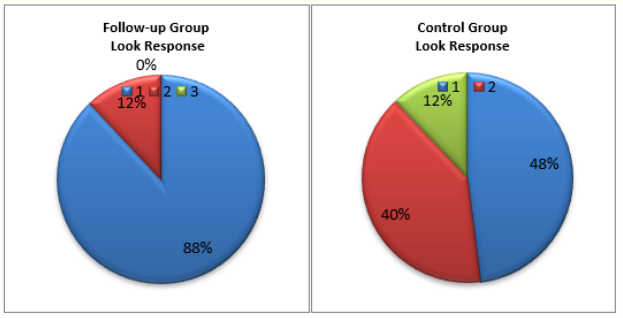


Figure 17

Social response

At the end of the third quarter, the answers begin to integrate and complex. The smile and guttural sounds are the first communicational responses, the beginning of social exchange.

One could understand the maturation of these responses linked and integrated to the maturational behaviours in relation to the sounds and the look; comparing both groups percentages are similar: the group received early attention as reduced to 88 percent of behaviours achieved and the control group only half (44 percent) reaches the behaviour achieved.

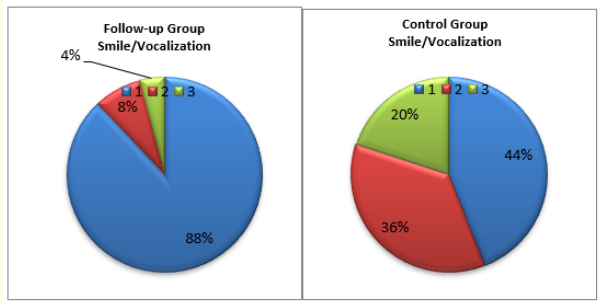


Figure 18

Conclusions

Throughout this research work, we try to signify some theoretical concepts, increase some known and new edges of child development and maturation (more specifically neonatal), favouring a therapeutic practice with possibilities of progress and scientific contribution.

Among the characteristics at birth, in the follow-up group there were ten born with female sex and fifteen with male sex and, in the control group, thirteen born with female and twelve male sex, so sex will not be considered a relevance feature.

In relation to the parameters that were taken into account, the condition of vulnerability would be delimited by the clinical characteristics observed in the new-born at birth: weight, gestational time and birth characteristics. In this case, both groups have similarities. With respect to the gestational time at birth, the bulk of both groups would be located in those born of preterm, that is, with a gestational time of 25 to 37 weeks.

The group that receives early care at birth is in a relative situation of vulnerability with respect to weight: between 1600 and 2500grs., The same does not occur with the control group: greater than 2500grs. This is an important condition at birth;

however, the medical criterion could be that they would not need early intervention regarding this point.

The context and the situation of childbirth would condition the first state of the new-born, understanding maternal and child stress at birth and its possible impact. In a new comparison, the group that is referred for early attention seems to be in direct association with this condition, the birth of the majority was due to an emergency.

Likewise, the new-born would also be conditioned by the factors that define the prenatal stage: maternal conditions, embryonic development and genetic origin; the factors that define its state in the perinatal stage: respiratory, haematological, nutritional, cardiovascular and infectious aspects and, finally, the postnatal stage: apneas, sepsis, convulsions, injuries, trauma, considering the possibility of sequelae. The identification of these risk factors would be of great importance as influential or conditioned on the evolution, maturation and early development in relation to the quality of life.

Prenatal factors will be considered, in this study, broken down into maternal conditions, genetic origin and embryonic development. Comparatively there are almost no differences between the two groups. In this population of fifty new-borns, a minimum proportion of children with features associated with a problem of genetic origin or malformation during embryonic development was observed; It is also significant that the maternal conditions were hypertension and / or gestational diabetes, in a significant percentage.

The starting point of this research is that the neonate, in the first days of life, expresses its difficulties of accommodation through the body, irritability states, disorganized behaviour, sleep difficulties, feeding, etc. Being these Some characteristics of children born in a state of vulnerability. This could be considered as alarm signals.

We worked on a question: On what aspects of development, inherent to that state of vulnerability, would early intervention affect, along with the necessary intervention and medical care?

General functions characteristics were considered, behaviour and motor responses to sensory input according to the maturational milestones and expected functional stage of development being evaluated.

An early intervention approach was performed on twenty-five infants of one of the two groups evaluated in this research, (Follow-up group). It was held on a daily basis. The first objective was to find answers based on sensory input: body contact, voice-sounds, object-visual presence, proprioception, vestibular stimulation. The second objective was to favour the organization of states, balance of muscle tone, motor and social responses. The third objective, indirectly, was to build a bridge between the mother and the new-born that favours the construction of the attachment bond.

Disorganized behaviour in a new-born is an alarm sign that accounts for serious developmental difficulties; It would indicate that your nervous system has not achieved this level of maturation. Early childhood time is considered a time of great value for child development and the conditions of maturation. The purpose of this research is to collaborate in the field of promoting the health of the child and his family. It would be useful to provide contributions that allow us to analyse some of the possible incidences of those bio-socio-psychological factors that affect the new-born, as well as analyse the effects of early intervention.

The main contribution was to provide facilitating tools that help improve the quality of life in relation to maturation and development, and expand intervention strategies therapeutic in the new-born with particular needs inherent to the conditions of its vulnerable state; All this allowed us to assess and determine the significant difference with respect to the group that, in a similar condition of vulnerability, did not receive the same intervention (Control Group).

It would be the worth rescuing the criteria raised from the results. The starting point would be the s responses: tone-automatic responses-responses organized as a first outline of sensory-motor exchange with the environment. In both groups, it was evident the characteristics of the state of vulnerability in neonates, determine the Initio their maturational process: both the automatic responses as the organized responses showed marked inhibition and / or disruption in general of fifty children of the sample. The first motor responses have a posture- tone relationship, cephalo-caudal maturation and archaic reflexes present; with it which were considered as items of evaluation: alignment head-trunk, pronated the position of the head and overhand the organization of the position of the neonate, Supine the position of the head, Supine the organization of the position of the supine neonate and

the organization of the four members regarding the online media and trunk, the kick, the position of the hand in fist, the position of the thumb relative to the fist. In all the responses the atypical components or directly the atypical response predominate, being the alignment of segments, in the first place, and the organization of the position of the RN in supine with four aligned members, the most difficult responses.

The second post-facto evaluation point is taken the fourth month of chronological age with the purpose of completing the first trimester of maturation of a new-born.

In relation to motor maturation, it could be considered that the neonate begins its process in a horizontal position needing balance in muscle tone to assimilate and accommodate its motor behaviors against the effect of gravity, being significant the Impact of early intervention in the follow-up group unlike the group that did not receive the same attention.

The organized responses, at the end of the first trimester, are related to the first indications of sensorimotor organization and the inhibition of archaic reflexes. The group that received early attention has achieved in 32% typical responses and reduce the atypical; the control group, however not achieved the adequacy of the same, staying with Him to rate guidelines not achieved: 40% of components atypical behaviours and 60% of atypical behaviours.

Motor maturation is cephalo-caudal, therefore cephalic control is the first significant milestone at this point. The organization of the ventral and dorsal decubitus posture is in relation to the head-trunk alignment. The movement, as a second to the posture, begins with the turn of the head on both sides. Considerable evidence is referenced in the effect of early intervention in this regard, responses with atypical components are reduced by a minimum percentage in both groups, making the gap that separates them in this regard notable: in relation to posture the group that Received early attention balances expected behaviors to 72% while the second group remains with 68% of atypical behaviors.

The driving pattern m most important adorative to the end of the first quarter is the movement against the effect of the gravity: drive sitting and movement of the four members online media; both movements inevitably include the organization Semicon synergies plex with the proprioceptive integration, visual and vestibular at the same time. 68 percent of the responses of the components with atypical monitoring group would interpret as an enabling point to the early intervention, unlike the 72% of the atypical responses of the control group in this respect. Both groups show a significant difference: the first, favoured with a timely intervention, makes a maturation process that, perhaps, should be continued; the second would be determined by atypical behaviour.

The hand has particular characteristics with respect to general motor maturation and with respect to the particular maturation of sensorimotor intelligence in the near future. The results obtained show how, compared to the response achieved by early intervention, maturation reaches an average percentage between expected behaviors and those that still do not reach it and maintain atypical components in the first group, while the group that does not It had the same intervention modality shows that it reaches an average percentage between what maintains an atypical component and the unexpected behaviour.

Another concept that determines its starting point with respect to the maturation of each new-born would be based on the first responses are from the sensory input, understanding that it is first perceived and then answered. It observed the vulnerability of infants in the reaction to body contact, search reflexes and suction (proprioception); orofacial movements: labial, lingual and suction coordination (proprioception, smell and taste), the attention to the sound (auditory) and face (visual). It was watched more difficult the coordination of move of orofacialments for the suction. At the end of the first quarter, the sensory response motor begins to integrate madurativamente process as the interaction with the environment.

There are two significant behaviors regarding sound: look for the sound source and turn when they speak to you. Both groups show good evolution, although the group that received early intervention minimizes (4%) atypical behaviors and the control group only 52 percent reaches the specific or typical responses.

The response to the look shows the same evidence as the response the sound, the group that receives early intervention minimizes atypical responses (12%), as well as the control group only 48 percent (half) reaches the expected responses.

At the end of the third quarter, the answers begin to integrate and complex. The smile and guttural sounds are the first communicational responses, the beginning of social exchange.

One could understand the maturation of these responses linked and integrated to the maturational behaviours in relation to the sounds and the look; comparing both groups the percentages are similar: the group that received early attention reduces it to 88% of behaviours achieved and the control group only half (44%) reaches the behaviours achieved.

Counting on the fact that the development of the CNS does not depend only on its own mechanism of growth and maturation, but that many other factors that act in this period are involved - that is what is called "plasticity - and that, it extends from the moment of conception until several months of the first year of life, is that the possibility of producing functional or structural changes due to endo and exogenous influences is inferred.

From the results of this investigation, it would be defined as transcendent to determine the early care and interventions that favour the development of the new-born in a situation of vulnerability and that are also useful for reducing neurodevelopmental alterations.

In this sent do "early" in relation to the age and "early" in relation to the expression of problems, would provide the opportunity to tap the great plasticity of the brain in the early stages of the life that will be greater during the period lactation. However, as a counterpart, perhaps the pathological process never appears. However, the observed sample, it is determined that there is a high percentage complying with this premise of the early intervention as favouring of development; but There is also a remaining percentage and, no less, that could be part of that population with pathological sequelae of that, the early intervention would reduce the impact of the disease or the severity of the sequel. The aim would be to promote the health and well-being of the child, reinforce emerging skills, minimize developmental delays and remedy existing deficiencies, prevent functional impairment and promote the adaptation of parents in this context.

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