29 - THE EFFECTS OF EQUINE THERAPY ON PATIENTS WITH CEREBRAL PALSY

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Introduction

Cerebral Palsy (CP) is characterized by a set of non-progressive disturbances that generates lesion in the developing brain being defined by chronic encephalitis (apud; VALDIVIESSO, *et. al*.2005).

Equine therapy is a therapeutic and educational method that makes the use of the horse as a working instrument. Above all, it aims the biological-psychological-social development of people that have special needs based on the practice of equestrian activities associating them with the education, equestrian, and health areas. This therapy allows rhythmic, precise and tridimensional movements with horses comparing them with the movement of the human pelvis when walking thus allowing the patient to constantly receive sensorial and stimulus input facilitated by direct contact of the horse`s movement with his/her body (ANDES-BRASIL, 2005).

Men and horse interaction benefits are well known since the ancient times. In 377 B.C., Hipocrates already considered equitation as a health regenerative element. The physician Asclepiads, from Prussia, suggested the method as treatment for epilepsy and different epilepsy cases being then spread out throughout Europe in the 70`s through the hands of Dr. Md. Gabriele Walter, and in 1989, the Equine therapy National Association (Ande- Brazil) with the headquarters in Brasilia, officialized the speciality (REVISTA SAÚDE, 2008).

Walter and Vendramini (2000) agree that Equine therapy employs equestrian activities and techniques to provide the patient not only physical benefits, but above all, psychological, social, and educational ones. They yet reinforce that this activity demands complete participation, of the whole body, thus making it easier the development of muscular tension and strength, relaxation, awareness of his/her whole body, improvement of motor coordination, observation, providing equilibrium, self assurance and self steam in a tolerant, environmental, and global approach.

According to Uzun (2005), horses possess three natural strolls: pace, trot, and gallop. The first is dawdler, marching, rhythmic in four steps, and symmetric where all movements generated on one side of the animal occurs in the same manner on the opposite side. The trot is a jumpy, symmetric pace, concentrated on two steps where the limb of each diagonal biped elevates and lands simultaneously, with a suspended time interval between the elevation and landing of each one. The third stroll, the gallop, is bustling, jumpy, asymmetric, three step run due to ample movement of the animal`s neck. The pace is the most indicated stroll for Equine therapy because of its regularity. Its rhythm has a frequency of 1 to 1.25 movements per second which makes the equestrian to perform 1,800 to 2,250 restorative adjustments in a thirty-minute session (LERMONTOV 2004).

Lermontov (2004) observes that the most important characteristics for the Equine therapy is the step produced and transmitted by the horse to the equestrian which series of sequential and simultaneous movements result in tridimensional movements, hence determining a muscular restorative adjustment to maintain posture and equilibrium. In the vertical plane, these movements translate in up and down movements, and in the horizontal plane they translate into right and left movements (horse`s transversal axis) and forward and backward movements (longitudinal axis).

According to Santos (2000) Equine therapy is indicated for numerous human abnormalities as for Cerebral Palsy, neural-motor lesions (cerebral and medullar) sensorial deficiencies (hearing, vocal, visual), behavioral and/or evolutionary disturbs, orthopedic pathologies (congenital or acquired), muscular dystrophies, amputations, generic syndromes, multiple scleroses, delay in the neurological-psychological-motor development, mental retardation, cerebral-vascular accidents, emotional, lingual, and learning disturbances, and autism to mention a few complex human disorders.

For children, it becomes an entertaining and leisured process because the practice leads to their satisfaction for being mounted on a gentle animal, and that transmits a notion of acceptance. Above all, it promotes a playful bond for the child, making it easier his/her acceptance in perform therapeutically, predominant activities. Moreover, it positively adds in the evolution of the treatment. The child will try to communicate with the animal establishing a friendly bond with the intention to please it.

As for Cerebral Palsy or non-progressive infant chronic encephalitis, Levitt (2001) believes that since the lesion is normally situated in the central nervous system in development, in the case of children, the clinical condition is not apparent in a static set of clear signals and symptoms. As time goes by the nervous system will mature, then, the degree of incapacity will gradually increase whence the perception of failures owing to the lesion will also grow.

The current study relays on a bibliographic revision on the effects of Equine therapy for patients suffering from Cerebral Palsy.

Methodological Guidance

Six articles, a Master thesis, and two dissertations published on sites (Google) and the e-journal Equoterapia dated from 1998 to 2008 were selected. Five printed works with the authors' theories and concepts were used taking in consideration the search for information and content. Keywords, such as Equine therapy, effects and benefits, and last but not least Cerebral Palsy were used. This is a bibliographic, exploratory study of analytical and descriptive character, above all of qualitative nature, being that this research was developed with the contribution of many authors who wrote about Equine therapy and its effects on people with Cerebral Palsy.

Michel (2005) understands that the bibliographic study is the essence of the exploratory study, for the reason that, it is with it that theories and concepts of authors about the theme is confronted and crossed examined profiting from books, articles, magazines, id est, it represents primary raised data. Cervo (1983) also agrees with these terms that bibliographic research tries to explain a problem from theoretical referential published in books or documents which could be descriptive or experimental. On both cases they pursue knowing and analyzing past and present, existing scientific or cultural contributions about a giving subject, theme, or problem.

Results and discussions

According to Crotti (2007) research about an analysis on the influence of equine therapy and Bobath`s neuro-evolutive concept with an eight-year-old child suffering from light spastic hemiplegic Cerebral Palsy on the left, treated for 14 sessions of Equine therapy and 14 sessions on the Bobath method, three times a week, showed improvement on body postural alignment, control and permanent acquisition of sitting and standing posture. In general agreement with Padilha (2005) that found in his case study with a child patient, also quadriplegic spastic, treated for three months, that after the conclusion of Equine therapy sessions noticed improvement on body, head, and tension`s global modulation control.

Equine therapy treatment on patients with motor dysfunction or Cerebral Palsy (CP) can contribute immensely, considering that the lesion itself is not progressive, to the interaction intervened by the therapist, to the child and horse. According to Araújo e Araújo (2007), these contributions indifferent of the age between 10 to 12 years, as for the children posture, showed significant postural improvement on the application of Equine therapy.

Municipal research, with a child and three adolescents that were participating in the “Equitation for Education” project, done in pairs, once a week, for 40 minutes, intended to evaluate learning difficulties based on Psychology. The results were startling. The very use of the animal allowed working on affection, the autonomy of move about. Provoked emotions and sensations drove these individuals to a self confrontation which is corporal and at the same time psycho-emotional. Results asserted in Gimenes and Andrades` (2004) research.

Araújo and Araújo (2007) found in a research with 27 children suffering from CP that there was an improvement related to body and muscular tension because the children got involved with the animal. That involvement became fundamental for the relation between horses and children who performed sequential and rhythmical movements inclining their bodies. The therapy was applied only once a week. In the study the author believes that the benefits would have been much better if the number of sessions were greater due to the tridimensional, precise, and rhythmical movement performed by the horse, favoring sensorial stimulus to the participant, in turn making possible compare the movement to that of the human pelvis when walking.

Valdiviesso (2008) evaluated a 10-year-old spastic athetoid quadriplegia CP child that was already under Physiotherapeutic treatment in a clinic undergoing a 10 forty-minute-session Equine therapy program twice a week. Suggestive advancements were noticeable on motor performance, however, relevant to posture alignment, there were some improvement especially on head positioning and sitting-posture body straightness.

Herzog (2004) mentions that maintain equilibrium purports at first recognize a body attitude via postural sense then readjusts its position. In a therapeutic work with a blind child, equilibrium demanded dedication and concentration from the rider who coordinated his own movements and dissociated his arms and legs gestures which in turn led to a better understanding of his corporal scheme. This understanding was a key for the rider who adapted to the horse`s rhythm demanding some concentration and relaxation of the antagonist and agonist muscles simultaneously, as well as the body, pelvis, and hips, to influence posture control and allowing greater equilibrium and flexibility. These movements activate static and dynamic stability of the child`s body becoming an important kinesthetic mechanism (Fonseca; Lima, 2004).

Following this thought, Guarrigue (2004) says that among other benefits, there are four therapeutic effects Equine therapy can provide, such as: relational, psychomotor improvement, its technical nature on apprenticeship and sociability. Thus, this psychomotor improvement is connected to the aspects of muscular tension, articulation mobility of spine and pelvis, equilibrium and erect-body posture, lateral obtainment, corporal scheme perception, movement disassociation and coordination, gesture precision and gesture interaction for the understanding of a command received or imitation. Medeiros e Dias (2002) assert that patient posture is improved through balanced reactions due to movement motor function attributed by the stimulus provided by the horse. That provides adjustment on superior limbs, scapular waist providing stability, frequency and alignment, a synchronization in the function and execution of defined movements.

As for sociability improvement defended by Guarrigue (2004), favors integration of people with cognitive or corporal damage with other practitioner and with the multi-disciplinary team. Franco (2008) affirms, in his inter-disciplinary analytical research in the education and health areas, that equine therapy makes pedagogical work with a special child possible by overcoming some sensorial, cognitive, and behavioral damage aiming social and scholastic inclusion. Nevertheless, he believes that the system should go through some transformation, above all, in pedagogical projects to answer the many peculiarities of those who have especial necessities having as allied equine therapy in the rehabilitation process of an individual.

It is necessary to consider that a child who has especial needs must be followed by a specific pedagogical process to insure a good education development, so much as related to intellectual stimulus on the teaching-learning process, as on motor activities and schemes, receiving, equally as any other individual, opportunities and primary conditions for his/her integral development, socializing in a learning environment (Fonseca; Lima, 2004).

In the research, it is possible to reflect that the major equine therapy achievements are the development of self-confidence, safety, discipline, concentration, and well being. Equestrian practice still favors a healthy sociability since it integrates the patient, the horse, and involved professionals.

Daily practice of synchronized horse march stimulates adequate functional posture in the control and rehabilitation of the patient undergoing therapy. These changes normally stimulate the child to act adequately with his/her physical and social limitations, and above all, the affection with the horse and therapist. That was observed because the author pointed out that the therapy was performed only once a week emphasizing the importance of increasing the number of sessions to obtain significant improvement to the patient. It is of importance to mention that equine therapy is a stimulator in the process of motor improvement, body stabilization, and muscular tension of patients with the pathologies emphasized in this study.

In depth, the authors attest that Equine therapy provides many achievements for people with Cerebral Palsy considering it a holistic and gradual process. So much so that the patient socializes with all agents engaged: the therapist, horse, sessions, and environment. Challenges are a Constant and collective. Thus, Equine therapy can contribute in sweetening and relieve of infirmity in the case of Cerebral Palsy, taking in consideration that, although in some cases it is not possible to alter congenital or acquired pathological condition; it is possible with its techniques to develop throughout the treatment process a person`s educational and rehabilitation thought. Above all, in his/her social acceptance as a citizen that has rights and duties but, as others, presents some limitations, and this person will live according to his/her possibilities in a social environment.

People that bear any form of Cerebral Palsy will need help their entire life with multiple session periods assuring them adequate functionality up to the time they would be able to take on their roll in new environments. Regular appointment and therapeutic session attendance can maintain the patient`s organic functions in order, so much related to prevention as assisted safe maintenance (Effgen, 2007).

Concluding, the results configured in six written articles and a master`s thesis that after Equine therapy the patients improved postural alignment, global tension modulation, toilet control, head positioning and body straightening on the sitting position. In a dissertation based on psychology, aimed to evaluate learning difficulties, it was observed that there was significant improvements on the participants` condition who developed their behavior related to concentration time when acquiring

knowledge, moreover, affection became more susceptible due to friendliness with the horse and the therapist. In another dissertation/research the author perceived that Equine therapy rises as a pedagogical and therapeutic resource that not only work with the improvement on the posture of the patient, but creates a more original social bond. However, the author alerts that some changes on the Pedagogical Political Process (PPP) become necessary to better attend such particularities.

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THE EFFECTS OF EQUINE THERAPY ON PATIENTS WITH CEREBRAL PALSY

ABSTRACT

Equine therapy is a therapeutic method that makes the use of horses to rehabilitate patients suffering from cerebral palsy toward shaping muscular tone, enhancing posture, and to improving movement and posture control of automatic actions. Cerebral Palsy is a condition derived from encephalic aggression on posture and movement characterized by muscle tension alterations that manifests early in life. This research is a bibliographic exploratory study of analytical and descriptive character relying with the contribution of many authors. It is of qualitative nature with the purpose of analyzing the effects of Equine therapy in patients suffering from Cerebral Palsy. Six articles, a master`s thesis, and two pornographies published between 1998 and 2008 were analyzed. After descriptive analysis it is possible to assert that Equine therapy exerts different affects in patients suffering from Cerebral Palsy, such as: development of self steam, dependability, discipline, concentration, well being, improvement of social relationships, motor coordination, upper body and stiffness and muscular tone, as well as posture control.

Keywords: EquinetherapyEffectsCerebral Palsy.

LES EFFETS DE L'ÉQUITATION THÉRAPEUTIQUE DANS DES PATIENTS AVEC PARALYSIE CÉRÉBRALE

RÉSUMÉ

L'Équitation Thérapeutique c'est une méthode thérapeutique, qui utilise le cheval dans la réhabilitation de patients porteurs de paralysie cérébrale pour ajuster la tônus musculaire, améliorer la position, et améliorer la réalisation de l'automatisme de contrôle postural et de mouvement. La paralysie cérébrale est la séquelle d'une agression encéphalique, caractérisée par des modifications de la tônus, de la position et du mouvement, que si manifeste dans les premières années de vie. Cette recherche s'agit d'une étude bibliographique, d'exploration de caractère analytique et descriptif, en comptant avec la contribution de beaucoup d'auteurs sur le sujet, de nature qualitative, en se proposant un analyse des effets de l'Équitation

Thérapeutique dans des patients avec paralysie cérébrale. Ont été analysés six articles, une thèse de Diplôme d'études approfondies, et deux monographies publiées dans la période de 1998 à 2008. Après analyse descriptive est possible d'affirmer que l'Équitation Thérapeutique exerce de différents effets dans des patients avec Paralysie Cérébrale, en pouvant citer : le développement de l'autoconfiance, de la sécurité, discipline, concentration, bien-être, au delà d'améliorer les rapports avec autres personnes, avec une saine sociabilité, améliore sa motricité, fermeté du tronc et tônus musculaire, ainsi que, contrôle postural.

Mot-clés : L'Équitation Thérapeutique - effets - paralysie cérébrale.

LOS EFECTOS DE LA EQUINO TERAPIA EM PACIEMTES CON PARÁLISIS CEREBRAL.

RESUMEN

La equino terapia es un método terapéutico que utiliza el caballo en la rehabilitación de pacientes portadores de parálisis cerebral para adecuar el tono muscular y mejorar la postura y control de movimientos. La parálisis cerebral es una secuela de una afección encefálica, caracterizada por alteraciones en la postura y movimiento que se manifiesta en los primeros años de vida. Estos estudios bibliográficos y exploratorios, son de carácter analítico y descriptivo, que cuentan con la contribución de muchos autores sobre el tema de naturaleza cualitativa, proponiendo un análisis de los efectos de la Equino terapia en pacientes de parálisis cerebral. Se analizaron seis artículos, una tesis de doctorado y dos monografías que fueron publicadas en el período de 1998 al 2008. Luego del análisis descriptivo es posible afirmar que la Equino terapia ejerce diferentes efectos en los pacientes con parálisis cerebral, pudiendo citar: el crecimiento de la auto confianza, seguridad, disciplina, concentración, bien estar, aparte de mejorar su relación con otras personas, con una sana sociabilidad, mejora su motricidad, afirma el tronco y tono muscular como también controla la postura.

Palabras llave: Equino terapia efectos Parálisis cerebral

OS EFEITOS DA EQUOTERAPIA EM PACIENTES COM PARALISIA CEREBRAL

RESUMO

A Equoterapia é um método terapêutico, que utiliza o cavalo na reabilitação de pacientes portadores de paralisia cerebral para adequar o tônus muscular, melhorar a postura, e melhorar a realização do automatismo de controle postural e de movimento. A Paralisia Cerebral é a seqüela de uma agressão encefálica, caracterizada por alterações do tônus, da postura e do movimento, que se manifesta nos primeiros anos de vida. Esta pesquisa trata-se de um estudo bibliográfico, exploratório, de caráter analítico e descritivo, contando com a contribuição de muitos autores sobre o tema, de natureza qualitativa, propondo-se uma análise dos efeitos da Equoterapia em pacientes com Paralisia Cerebral. Foram analisados seis artigos, uma tese de mestrado, e duas monografias publicadas no período de 1998 a 2008. Após análise descritiva é possível afirmar que a Equoterapia exerce diferentes efeitos em pacientes com Paralisia Cerebral, podendo citar: o desenvolvimento da autoconfiança, segurança, disciplina, concentração, bem-estar, além de melhorar o relacionamento com outras pessoas, com uma sadia sociabilidade, melhora a sua motricidade, firmeza do tronco e tônus muscular, bem como, controle postural.

Palavras-chave: Equoterapia efeitos Paralisia Cerebral.