119 - BENEFITS OF EQUITHERAPY IN THE TREATMENT OF CEREBRAL PALSY: A REVIEW ON BRAZILIAN LITERATURE

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doi: 10.16887/85.a2.119

INTRODUCTION

Cerebral palsy is characterized as motor dysfunction, due to non-progressive brain damage that occur early in life. It is assumed that the high rate of cerebral palsy in Brazil is a consequence of the lack of care of pregnant women. (ARAUJO,RIBEIRO,SILVA 2010).

Some studies that have been conducted have shown that most cases of cerebral palsy result from prenatal factors (ZANINI,CEMIN,PERALLES 2009) such as bad maternal nutrition, ineffective hospital and doctors care, especially for children born before the proper period for neurological formation (MANCINI, ALVES, SCHAPER 2004).

What contributes on the other hand is the technology available at the neonatal intensive care unit that promotes survival of premature infants, thereby increasing the incidence of cerebral palsy (ARAUJO,RIBEIRO,SILVA 2010).

The most common causes that can be acquired after birth are infections, cerebrovascular accidents and injuries (ZANINI,CEMIN,PERALLES 2009).

The child with cerebral palsy is affected in different ways, depending on the area of the nervous system that is affected. Among some of these affections, we can cite neuromuscular changes, such as muscular tonus change, permanence of primitive reflexes, stiffness, spasticity, and others (MANCINI, ALVES, SCHAPER 2004).

One of the characteristics of cerebral palsy is the spasticity with involuntary muscular hypertonia, found in pyramidal injuries of the Central Nervous System, more precisely in the inhibitory corticospinal bulb reticular tract (BOTELHO, OLIVEIRA, SOUZA, 2003).

For children with cerebral palsy the treatment requires various techniques involving multidisciplinary approach due to the different affections, deformities, asymmetries and postural deviations (ARAUJO, RIBEIRO, SILVA 2010).

On March 27th of 2008, the Council for Physiotherapy and Occupational Therapy, according to the resolution nº 348, considering the opinion n° .008 / 2008 noted by this COFFITO (10) about the social and scientific evidences that sustains the Equitherapy apprehended as a therapeutic resource in the treatment list used by Physiotherapists and Occupational Therapists; The article 2 states that in the exercise of his or her professional activities, the Physiotherapist is capacitated to apply according to his or her principles on Equitherapy, based on the kinesiologic-functional diagnosis in accordance to the specific therapeutic objectives in his or her area of actuation.

The Equitherapy is indicated for the cases of encephalic traumatism, motor disabilities caused by neuromotor injuries, sequelas from inflammatory processes of the CNS, coordination disorders and in the muscular tonus regulation, such as spasticity, dystonia, balance disorders, peripheral neurological injuries (obstetric brachial plexus palsy), orthopedic dysfunctions, behavioral and evolutive disorders. It has many objectives, among them: to improve global posture, normalize body tonus, stimulate balance, improve spatiotemporal coordination, preserve intact articulations within normality patterns, educate the sensory nervous system, and promote respiratory reeducation, relaxation, besides developing motivation, confidence and self-esteem that are of great importance for the success of the objectives mentioned above (SILVEIRA E WIBELINGER 2011).

Through Equitherapy stimuli that emulate the amplitude, rhythm and speed, capable of minimizing the muscular tonus are obtained. The evolution of the posture of the trunk makes the motor gesture better coordinated, avoiding the occurrence of compensations and fixations that may result in deformities (ARAUJO, RIBEIRO, SILVA 2010).

In Equitherapy, the engagement of the patient is indispensable, so that the practitioner can have a better development. Therefore, Equitherapy is a therapy that seeks, along with the aid of the horse, the progress of the motor functions, promoting physical, psychological and social gains, being an important auxiliary therapy to be used in Physiotherapy (ARAUJO, RIBEIRO, SILVA 2010).

Equitherapy promotes the practitioner global development, because it demands his or her participation as a whole. When the horse moves, it generates a tridimensional movement on its torso, on the three axes: forward and backward, up and down, left and right, and this movement is transmitted to the horse rider through the contact with the back of the animal and his or her body (BOTELHO,OLIVEIRA E SOUSA 2003).

This study aims to demonstrate the benefits that the individual is granted with after he or she is treated by means of Equitherapy.

METHOD

This study is a bibliographic review on Brazilian scientific articles, realized by means of research on LILACS (Caribbean and Latin-American Literature in Health Sciences) database and Neurosciências Magazines. A research on SciELO database was also realized, although the articles found did not mention the title of the article, and therefore were excluded. Key words used were “Equitherapy”, “cerebral palsy” and “benefit”. The research was made from April to June of 2014 and made use of articles published between 2003 and 2014, for the fact that not many articles could be found in a term equivalent to the last five years.

The criterion of inclusion were: articles about physiotherapeutic treatment focusing on Equitherapy used in patients with cerebral palsy, published in Portuguese and citing the key words. The articles excluded did not relate cerebral palsy with Equitherapy, the respective texts were not fully available or were not considered scientific articles.

RESULTS

The articles were initially screened by key words, resulting in 31 articles in both Lilacs database and Neurosciências Magazine. Out of these, 15 articles were excluded because the time since the year of their publication exceeded the term of eleven years, and eight others did not report physiotherapeutic treatment, so that, at last, five articles that served the criterion of inclusion remained. Data found were descriptively analyzed, as shown in table 1.

Table 1 – Selected articles analysis

YEAR	AUTHORS	OBJECTIVE	MÉTHOD	RESULTS
2010	Araujo e Araujo AE, Ribeiro V, Silva B.	Demonstrate the postural benefits in children with cerebral palsy after participating in a program of Equitherapy	Descriptive study.	The comparisons between children in the pre-test and post-test showed significant differences that resulted in a body benefit of 73% and that the treatment provided a benefit of 1,93 time in relation to the posture
2011	Silveira M, Wibelinger L.	Verify the effects of Equitherapy in the postural reeducation emphasizing the interaction with the horse as therapeutic resource	Literature review	Positive results such the improvement of balance, posture, coordination and motor gains; Increase of stability on the horse, improvement in the hip joint functionality.
2003	Botelho LA, Oliveira B, Souza S.	Analyze the effects of hypnotherapy on spasticity of patients with cerebral palsy and medullar injury	Descriptive study	Based on Ashwort scale patients with cerebral palsy presented an average decrease of 0.5 degree in the first session in the adductor muscles on left and right sides
2009	Zanini G, Cemin N, Peralles S.	Expand knowledge on the causes for the development of CP, aiming to study the prevalence of causes.	Literature review	It was verified that prenatal events were the most frequent causes for the cases of CP, when prenatal examinations in pregnant women is very important
2004	Mancini M, Alves A, Schaper C, Figueiredo E, Sampaio R, Coelho Z, Tirado M.	Compare the impact of neuromotor gravity to the functional profile of children with CP	Descriptive study.	Functionality in children with CP is influenced by social environment (care takers) and may interfere in the routine and consequently perfect the ability shown by these children.

Legend: CP (Cerebral Palsy);

DISCUSSION

In developed countries, Equitherapy has become more and more popular, used as a complementary therapy along with traditional treatment and it has been chosen by the parents of children with cerebral palsy, because it encourages persistence and promotes enthusiasm. In Brazil its use is still limited, in spite of having been recently introduced among the therapies offered by the public healthcare (ARAUJO, RIBEIRO, SILVA 2010).

Silveira and Wibelinger (2011) realized their study with children at ages between six and twelve years with cerebral palsy, in which they were submitted to sessions of Equitherapy, presenting mild to moderate spasticity, postural alteration, independent gait and good comprehension. The children obtained a decrease in their scoliosis degree and improved their psychomotor parameters, such as mobility of the trunk and upper limbs, balance, posture and gait, and also had psychosocial improvements such as in their self-esteem, motivation, attention, concentration, initiative, and autonomy, as well.

In a case study of Botelho, Oliveira and Sousa (2003), the degree of spasticity of all patients in the adductor muscles of the hip, was observed through the modified Ashworth scale. Data were reassessed after Equitherapy session, with duration of 30 minutes, held once a week, with the horse at step. Adductor muscles on both left and right side presented a reduction of 0.5 degree in Ashworth scale in the first session, and maintained the results until the beginning of the tenth session. Based on data collected in this research, all cases that were observed had an improvement in the spasticity, attesting Equitherapy is a valid method for the reeducation of spasticity and a means to increase the amplitude of the adduction. The author emphasizes that more study is needed to determine the statistic significance of the tendencies found in this preliminary analysis.

In another research of Silveira and Wibelinger (2011) the motor functionality of three children with ages between 27 and 54 months with cerebral palsy was analyzed, using Equitherapy once a week, during 10 weeks, exploring the results by means of survey, since none of the children presented significant gains in the measurement of the standard result. However the parents were optimists in their perception of the results in the head movement control and in the movement amplitude.

Mancini et al (2004) shows the social environment effect on the functional profile of children with cerebral palsy with moderate impairment, especially in self-care and social functionality areas. It was found that, in spite of children with moderate impairment present a set of abilities equivalent to those with mild impairment, if their care takers do not motivate them, they end up more dependent than the children with mild impairment, equating them to the children that present severe level of impairment.

Equivalently the authors Araujo, Ribeiro and Silva (2010) cite results that are similar to those of a work realized where the parents oriented them in behaviors related to the family history and personal help in the changes in the perception and values.

Silveira and Wibelinger (2011), also show that a child can be encouraged by means of granted cooperation, and by that he or she is inclined to accept the horse as his or her friend, for which Equitherapy was found as an answer to 27 children with diagnosis of cerebral palsy, where there was an improvement in the inhibition in the pattern of pathologic movement, improvement in posture tonus, normal automatic reactions and facilitation of motor sensory perception was gained.

Araujo, Ribeiro and Silva (2010), observed that regarding to the age the best responses to the treatment are found in younger children, because of the absence of previous bone deformities or articular contracture and fixed deformities, situations usually found in more advanced ages.

In the studies of Zanini, Cemin and Peralles (2009) it was found that prenatal events prevailed and were more frequently cited in the surveys, being statistically ampler. It says yet that in order to obtain a more anticipated diagnosis of cerebral palsy, prenatal examination in lactating women is needed, so these may have a more detailed attention on their pregnancy, as the sutdy showed that prenatal conditions are the most frequent causes of cerebral palsy.

The positive effect of Equitherapy has also been reported in the development of gross motor activity using specific scale GMFM (Gross Motor Function Measure) which was not considered for this study (ARAUJO E ARAUJO AE, RIBEIRO V, SILVA B, 2010).

The results of the study of Mancini et al, say that the professionals that work directly with children with cerebral palsy must exceed in changes uniquely oriented to their intrinsic elements, and also include awareness and orientation of the care takers, in order for these to motivate the active participation of their children in the daily activities.

Silveira and Wibelinger (2011) show that for the work of postural correction the most indicated is relaxation, realized with the practitioner in supine or ventral position on the horse's back, in an calm environment. From this awareness much can be achieved, because the practitioner can feel the horse's movement under his or her body, as a massage on his or her dorsal muscles.

CONCLUSION

This research made possible to observe the apparent gains of children that were treated with Equitherapy as a form of intervention, complementing the Physiotherapeutic treatment, that explores the potentialities of the practitioner because the environment and the Equitherapy are motivating and make overcoming of most consequences from CP possible, using the horse as a complementary means of rehabilitation. In the studies, the results were positive because Equitherapy perfects motor ability, decrease spasticity and normalize the muscular tonus.

The contact with the animal provides a sensation of high self-esteem in children with cerebral palsy. Although there are limitations in the theme found in the literature, there are reported cases of benefit after the interruption of the treatment.

There is a lack of material reporting Equitherapy in the treatment of cerebral palsy, suggesting the necessity for more research in this area, in order to increase the availability of scientifically attested results.

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BENEFITS OF EQUITHERAPY IN THE TREATMENT OF CEREBRAL PALSY: A REVIEW ON BRAZILIAN LITERATURE.

ABSTRACT

Introduction: Cerebral palsy is characterized as motor dysfunction, due to non-progressive brain injury that occurs early in life. Objective: Verify the publications in the area of physiotherapy related to Equitherapy in cerebral palsy, analyzing the effectiveness of various methods of intervention. Method: Literature review, by means of research on Lilacs database and Neurosciências magazine, between April and June of 2014, using the key words "benefits", "Equitherapy" and "cerebral palsy". Criterion of inclusion were: articles promoting physiotherapy, published in Portuguese and related to the key words. Results: Out of the 30 articles initially found, 03 that served the criterion were included. With this study it was possible to observe the necessity for more research in neurology with additional and important techniques such as Equitherapy that helps the treatment of pathologies such as cerebral palsy. Conclusion: it was observed the apparent gains provided by Equitherapy as an intervention, complementing physiotherapy, as it explores the potential of the practitioner because the environment where it is held is stimulating and allows overcoming.

KEYWORDS: Benefits, Equitherapy, cerebral palsy.

AVANTAGES DE L'HIPPOTHÉRAPIE SUR LA PARALYSIE CEREBRALE: UNE REVUE DE LA LITTÉRATURE BRÉSILIENNE.

RÉSUMÉ

Introduction: La paralysie cérébrale est caractérisée par des troubles moteurs reliés à une lésion cérébrale non progressive qui se produit tôt dans la vie. Objectif: Vérifier les publications dans le domaine de la physiothérapie concernant l'hippothérapie pour la paralysie cérébrale, en analysant et en comprenant l'efficacité des différentes méthodes d'intervention. Méthode: Revue de la littérature, avec la recherche dans les données scientifiques Lilacs et le Journal de Neuroscience, d'avril à juin 2014, en utilisant les mots-clés «avantages», «hippothérapie" et "paralysie cérébrale". Les critères d'inclusion étaient les suivants: des articles qui encouragent la thérapie physique, limités à la langue portugaise et des articles liés aux mots-clés. Resultats: Sur les 31 articles trouvés initialement, cinq articles qui correspondaient aux critères d'inclusion ont été sélectionnés.Avec cette étude, nous avons observé les gains apparents réalisés par les enfants dans l'exécution de l'hippothérapie comme une intervention, en complément de la thérapie physique et appelée thérapie complémentaire, car elle exploite le potentiel du praticien dans un environnement stimulant qui favorise surmonter les limites physiques. Conclusion: Dans cette étude, on a pu observer la nécessité de rechercher le domaine de la neurologie et des techniques supplémentaires importantes tels que l'hippothérapie, pour aider dans le traitement de maladies telles que la paralysie cérébrale.

MOTS-CLÉS: avantages, hippothérapie, paralysie cérébrale.

LOS BENEFICIOS DE LA EQUINOTERAPIA EM LA PARÁLISIS CEREBRAL:UNA REVISIÓN DE LA LITERATURA BRASILEÑA.

RESUMEN

Introdución: La parálisis cerebral se caracteriza por la disfunción motora, por razón del daño cerebral no progresivo que se producen en la fase inicial de la vida. Objetivo: Verificar las publicaciones en la área de fisioterapia en relación con la equinoterapia en la parálisis cerebral, mediante el análisis y la comprensión de la eficacia de los diversos métodos de intervención. Método: revisión de la literatura, la búsqueda de bases de datos con las Lilacs y Journal of Neuroscience, en el período de abril a junio de 2014, utilizando las palabras clave "beneficios", "equinoterapia" y "parálisis cerebral". Los criterios de inclusión fueron: artículos de promoción de la terapia física, limitado a los artículos de lengua portuguesa y palabras claves.Resultados conexos: De los 31 artículos que se encuentran al principio, se seleccionaron 05 que coincide con los criterios inclusión. Con este estudio se puede observar ganancias aparentes hechos por los niños en la realización de la hipoterapia como una intervención, como complemento de la terapia física llamada terapia complementaria, que explora el potencial de la practicante porque el ambiente es estimulante y que permite la superación. Conclusión: En este estudio, podemos sugerir la necesidad de la investigación en el campo de la neurología con técnicas complementarias y importante como la equinoterapia ayuda en el tratamiento de enfermedades como la parálisis cerebral.

PALABRAS CLAVE: beneficios, terapia equina, parálisis cerebral.

BENEFÍCIOS DA EQUOTERAPIA NA PARALISIA CEREBRAL: UMA REVISÃO DA LITERATURA BRASILEIRA.

RESUMO

Introdução: A paralisia cerebral é caracterizada como disfunção motora, em razão de lesão cerebral não progressiva que acontece na fase inicial da vida. Objetivo: Verificar as publicações na área da fisioterapia relacionadas à equoterapia na paralisia cerebral, analisando e compreendendo a eficácia das diversas metodologias de intervenção. Método: Revisão da literatura, com busca nas bases de dados Lilacs e Revista de Neurociência, no período de abril a junho de 2014, utilizando as palavras-chave “benefícios”, “equoterapia” e “paralisia cerebral”. Os critérios de inclusão foram: artigos promovendo tratamento fisioterapêutico, artigos limitados ao idioma português e relação com as palavras-chave.Resultados: Dos 31 artigos inicialmente encontrados, foram selecionados 05 que se encaixaram nos critérios de inclusão.Com este estudo, foi possível observar os ganhos aparentes adquiridos pelas crianças ao realizarem a equoterapia como forma de intervenção, complementando o tratamento fisioterapêutico e chamada de terapia complementar, pois explora as potencialidades do praticante em um ambiente estimulante que favorece a superação das limitações físicas. Conclusão: Com esta pesquisa pode-se observar a necessidade de pesquisa na área da neurologia sobre técnicas complementares e importantes como a equoterapia, que auxiliem no tratamento das patologias como a paralisia cerebral.

PALAVRAS-CHAVE: benefícios, equoterapia, paralisia cerebral.