Hippotherapy as a form of physiotherapy support in children with cerebral palsy in the opinion of parents

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Abstract

Hippotherapy is a form of therapy that allows a child to explore the natural world. It gains more and more popularity. It brings very good results in the process of physiotherapy in children with cerebral palsy. It grows very rapidly, winning over more and more supporters not only among parents of children with disabilities, but also among professionals dealing with disabled people. The aim of this study was to present, on the basis of own research, the assessment of the effectiveness of hippotherapy as a form of support in treatment of cerebral palsy (CP). The study included 18 pairs (parent and child) participating in rehabilitation for people with CP. 88.9% of respondents recognized that hippotherapy serves its purpose as a therapeutic form. In turn, 77.8% said that hippotherapy is beneficial and useful therapy for people with CP. Although the parents highly appreciate the role of hippotherapy for comprehensive improvement in the case of CP, they do not consider it to be its only form.

Keywords: cerebral palsy, physiotherapy, hippotherapy

Introduction

Hippotherapy is a phenomenon among therapeutic methods. It grows very rapidly, winning over more and more supporters not only among parents of children with disabilities, but also among professionals dealing with disabled people. An adventure of a man and horse started many thousands of years ago still continues. The external world changes, but the nature of the horse, fortunately, has not changed. The nature of man has not changed either, contrary to appearances, but the conditions in which he develops, grows and lives have changed. The effects of these adverse changes in the environment do not allow to wait for them long, more and more frequently in children occur various developmental disorders [1].

During the treatment of children with developmental disorders therapists increasingly seek to enrich the sensory experience [1]. One of the forms of therapy, which allows children to explore the natural world is a therapy through horseback riding and contact with a horse. It is used to treat many types of diseases and it can be used for both children and adults [2]. Hippotherapy aims to restore health and improve it with the help of the horse and horse riding, especially in people with a history of disease that leave permanent traces in the physical fitness and mental life, with mental disability, developmental deficits, with damage analyzers (vision, hearing), and socially maladjusted. In this method, there are no major restrictions as to the type of shock, the patient's age and due to the specific property of horse motion it brings very good results in the work on evolution of balance reactions, reduction of spasticity, preparing children for walking. Therefore, it brings big benefits in the treatment of cerebral palsy [2].

The aim of treatment of a child with CP is the inhibition of persistent pathological reflexes, logical pioneering physiological reflexes, muscle tension normalization and improving motor coordination, stimulation of psychophysical and social development. Hippotherapy creates favorable conditions for achieving these goals [3].

Hippotherapy owes its specification to a horse taking part in the therapy. It is the presence of the horse as “co-therapist” that makes it a unique and exceptional therapeutic method giving completely new and unheard of in other treatments options. The most commonly used in the treatment element is riding a three-dimensional movement of the horse's gait, giving the rider the impression of a human walking. Moving at a walk horse carries motor impulses to the pelvis, and then to the trunk, shoulders and head of the child sitting on it. Drooping back of a horse at the moment of pulling the hind limb back and arching the back at the time of slipping it under the trunk make the rider move up and down. The support on the left (or right) side pair of legs (at the time of transfer of the second pair) produces alternating falling of the unsupported side of the horse body, causing lateral movements of the rider with characteristic for human walking lowering in turns one or the other side of the pelvis. Alternating pulling the horse's legs out is a sour-
The mere staying on the horse requires finding the balance, which is lost with every step. Changes in the direction of rides, stopping, moving off, acceleration and deceleration of ride pace are the additional stimuli used in the activity. The balance while riding is possible if in all phases of movement the center of gravity of the rider coincides with the center of gravity of the horse. Sometimes, in order to increase the therapeutic effect a child can be put before or behind the center of gravity of the horse or we can change the terms of impacts of the forces by putting a child rearward. The condition of effectively conducted hippotherapy is to get a proper seat by a child, i.e., one in which the natural curvatures of the spine are not in any phase of movement increased and the pelvis is in a middle position (not in anterior or posterior inclination) [2]. The aim of the study is to present hippotherapy as one of the methods supporting the treatment of children with CP. The research aims to show how parents of children attending hippotherapy evaluate this therapeutic form. This work aims to highlight the role and function of the horse as a innovatory component of therapy, which is one component of rehabilitation of patients suffering from cerebral palsy. Main research issues focused on how parents evaluate the role of hippotherapy in the process of comprehensive physiotherapy of a child with cerebral palsy and whether this form of therapy has a beneficial effect on the physical condition of the child. In addition, the research aimed to demonstrate how parents evaluate the availability of hippotherapy and whether it also affects mental sphere of the patient.

Materials and methods

The study group consisted of participants of rehabilitation stay, which took place in the village of Wycześniak in the Bolimowski Landscape Park. Rehabilitation holiday was organized by the Foundation for Assistance for Youth and Disabled Children called "HEY KONIKU". The study group consisted of 18 people and was diverse in terms of age (from 7 to 31 years) and gender. Children were accompanied by their parents or caregivers who provided answers to the questions in the questionnaire. In the studies the researchers used a questionnaire of their own design, which included questions about the child and his family, and questions about the subjective feelings of the parents or guardians about the conducted hippotherapy. For the research purpose related to this work, the following research techniques were used: a survey and an interview.

Results

The study showed that 88.9% of respondents regarded hippotherapy as a form of therapy that meets its therapeutic tasks. Only 11.1% had no opinion on the subject (Chart 1).
Moreover, the vast majority of parents, as much as 77.8% considered hippotherapy to be beneficial and necessary. In turn, 22.2% had no opinion on the subject (Chart 2).

All parents surveyed felt that hippotherapy is an appropriate complement to their children’s therapy. The unanimity of parents presented in the response to this question indicates observed by parents and guardians positive effects of the therapy. Despite the positive opinions on hippotherapy, however, 66.6% of parents believe that hippotherapy cannot constitute the only form of therapy. Positive answer was given by only 11.1% of respondents, and 22.2% had no opinion (Chart 3).
It is worrying that, according to 77.8% of the respondents the answer to the question of whether it is said enough about hippotherapy in CP is no. Whereas 22.2% of parents have no opinion on the subject (fig. 4). None of the respondents feel that enough is said about this method of treatment. Parents of disabled children expressed their subjective feelings associated with the conducted therapy. For them, the best indicator of the effectiveness of the therapy is the child's well-being. In testing the opinion on the impact of hippotherapy on the child's psychological well-being, 88.9% of the respondents felt that this therapy has a significant impact on the psyche of the child, while 11.1% had no opinion on the subject (Chart 5).
Regarding the observed effects resulting from the participation of children in hippotherapy activities caregivers most frequently cited positive impact on: the psyche and the physical condition of the child, improving mobility, opening up the child to others, recovering their peace, showing joy, improving balance and reflexes, overcoming fears, becoming stronger, more willing participation in other activities of rehabilitation and a better mood.

**Discussion**

The vast majority of parents evaluate the role of hippotherapy in the complex action of physiotherapy as needed and positively influencing the behavior of the child. The research also shows that parents regard hippotherapy as an effective form of therapy. Despite the positive reviews about hippotherapy, most parents think that hippotherapy cannot constitute the only form of therapy. The presented above analysis also shows that parents are not satisfied with the availability of hippotherapy and public awareness about the rehabilitation of children with cerebral palsy. They point to the need for dissemination of information related to the issues of hippotherapy in cerebral palsy of children.

The aim of a therapy with a horse and horse riding therapy is to restore to these persons physical and mental efficiency to the practicable extent. Hippotherapy is one of the elements of a comprehensive physiotherapy and is conducted by a specialist on the order of a physician. With this form of rehabilitation in patient with CP occur changes such as:

- reducing imbalances and improving defensive reactions
- increasing the capacity of locomotion and providing contact with an animal and nature,
- stimulation of psychomotor development, including: improving the visual motor coordination, spatial orientation and understanding in the scheme of own body, increasing the capacity of attention and maintaining an organized activity, increasing the motivation to exercise and developing self-reliance,
- increasing self-esteem,
- relaxation and weakening neurotic reactions.

Horse riding affects teaching and educational achievements and increasing self-esteem.

The gentle, rocking motion of the horse’s back, the warmth of his body, positioning the patient’s lower limbs in abduction and three-bend helps to reduce muscle tension. Application in terms of relaxation of specific positioning or bringing to a child’s proper pounce enables the inhibition of persistent reflexes and shaping proper balance reactions [2].

In hippotherapy there are such forms distinguished as: physiotherapy on horseback, psycho-pedagogic horse riding, therapy with a horse and horse riding for the disabled (in terms of sports and recreation). It should be noted that this division is not rigid, and various forms of therapy intermingle and complement each other [3].

The form of physiotherapy focuses on restoring physical fitness through appropriately chosen exercise therapy, performed on horseback moving the walk. It is recommended and supervised by a physician, led by a physiotherapist and is a complementary method for the classical physiotherapy [1].

In turn, psychological horse riding defines the set of actions taken to improve intellectually, cognitively, emotionally and physically. During horseback riding and activities related to it educational, pedagogic activities, elements of psychotherapy, speech therapy and occupational therapy are used. The therapy is conducted by educators and psychologists [1, 5].

In contrast, treatment with a horse is using an animal for medicinal purposes, as well as close-up of the patient and the horse, which gives a therapeutic effect. The patient due to relationships established with the animal improves its communication with the outside world. Riding alone can be one of the elements of this form of therapy, but it does not have to. It is conducted by educators, psychologists and psychiatrists [1].

Horse riding for disabled people in terms of sports and/or recreation is not part of hippotherapy, but it is closely related to it and has therapeutic functions. It allows sporting activities for people with disabilities, developing the habit and need for active leisure time in contact with the animal and nature. Classes are taught by riding instructors specially prepared and instructors of motor recreation with a specialization in hippotherapy [1, 5].

Through contact with live animals there is also psychological impact. A child establishes a partnership with a new friend, knows its name, learns its habits and acquires the skills to live with another living being [3]. A patient seated or lying on the back of a horse, embracing arms around its neck, receives sensations coming from touching a warm, pleasant, smooth skin and mane of the horse. These experiences help the child learn new sensory experience. While riding a horse, the child looks at the world from a completely new height; looking from above, he/she sees different proportions and space, stimulates psychomotor centers and imagination. Although the horse is larger than the patient it obeys him. As a result, the child becomes bolder, has a sense of achievement and increasing self-esteem.

Horse riding affects teaching and educational process in shaping the personality of young patients. Children alienated from their peer environment through their “otherness” establish very quickly emotional contact with the animal. The horse is not only a living gymnastic instrument, it is also a partner with whom the child, in particular not only physically disabled, but also in terms of verbal communication, can communicate using simple and easy signals. Establishing by the child a "dialogue" with the horse has a beneficial effect on cognitive and emotional sphere. The proximity of the horse, his warm breath give a sense of security. This makes it easier to establish emotional contact also with the team of caregivers [6]. According to parents and
guardians hippotherapy is a form of physiotherapy and perfectly fulfills its tasks as a form of therapy of both physical and mental sphere of a child. Due to hippotherapy children are perceived as calmer, more open and happy with themselves. Patient muscle relaxation and positive mental experiences bring a sense of relaxation and rest. Although the therapeutic horseback riding is mostly determined by the particular value of the horse in training the trunk and body balance, it has an inestimable value as a living stimulator. The positive impact of a horse as a natural pacemaker is described by researchers in their studies, where special attention is paid to the development of positive behaviors in children with cerebral palsy undergoing regular exercises with the horse [3].

There is no doubt that hippotherapy is only one of the methods that can complement the program of rehabilitation of children with cerebral palsy. Some children, because of the specificity of problems or disability, cannot benefit from this form of rehabilitation. There should not be the case that the child is subjected only to hippotherapy. This method should enter into comprehensive range of therapies provided for children with cerebral palsy. An important aspect of treatment is continuity of hippotherapeutic exercises. It is not enough just to use 5-10 series of exercises and expect great results. Sometimes, after several months of hippotherapy one can observe a minimal improvement of health status in the child [7]. Previous studies conducted in children with cerebral palsy have shown that hippotherapy is a method that gives great opportunities to improve the physical health of the patient, but also strongly affects the emotional sphere. The horse used during the course gives support and the ability to transfer to it the selected part of the emotional ties of the child and is very important in development of personality. This allows to establish contacts outside school with children of similar damages and sufferings, gives pleasures, which are hard to achieve in the lives of people with disabilities [3]. Most of joy and pleasure that children draw during hippotherapy, flows just from contact with a living being, a gentle, friendly and fully accepting them. The ability to establish a specific dialogue and directing so big and yet obedient animal poses an unforgettable experience, also the need for care and nurture is not a nuisance because it makes you feel needed and responsible [5, 8, 9, 10, 11, 12]

Conclusions

1. Parents highly value the role of hippotherapy in the process of comprehensive physiotherapy of a child with cerebral palsy.
2. Hippotherapy has a beneficial effect on the physical condition of the child.
3. Parents believe the availability of hippotherapy is insufficient.
4. Hippotherapy has a positive impact on the mental sphere of a patient.

References:


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