

POSSIBILITIES CONCERNING THE TELEREHABILITATION OF CHILDREN WITH DEVELOPMENTAL AGE DISORDERS AND EVALUATION OF SUCH A THERAPY BY THEIR PARENTS

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ABSTRACT

Aim. The aim of this study was to analyse the possibility of conducting telerehabilitation among children with developmental age disorders (by their parents), as well as to evaluate its course and effectiveness.

Methods. The work analyses the possibilities of telerehabilitation among children in Poland and compares them with reports from other countries. Next, to parents of children who have undergone such a therapy were asked about their opinion. A survey was conducted in a group of parents of patients rehabilitated during the pandemic via teleconsultations. The survey included questions about the advantages and disadvantages of telerehabilitation, the evaluation of its effectiveness and further prospects for such a therapy.

Results and conclusion. 56.7% of the respondents were satisfied and 16.7% of parents were dissatisfied with this form of therapy. 60% of the examined people reported that constant contact with a physiotherapist motivated them to carry out systematic exercises with a child at home. Only 6.7% of patients did not see any progress in rehabilitation. 26.7% of people observed a very big improvement and 20% - a big improvement. In the longer time, 3.3% of the respondents declared a desire for exclusive telerehabilitation, 13.3% - would never like to take advantage of this form of therapy again. 36.7% of patients would expect hybrid therapy: some classes in the institution and some classes within the framework of teleconsultations. Telerehabilitation can be a valuable supplement to the traditional therapy for children with developmental age disorders. To ensure effectiveness, telerehabilita-

tion requires very good cooperation between the therapist and the patient's parents and with the child himself.

Cognitive value. The physiotherapist should know the expectations of the patient's parents and react to emerging problems. The analysis of parents' opinions presented in this study will help to create the best forms of telerehabilitation.

Keywords: telerehabilitation, developmental disorders, evaluation of e-therapy, effectiveness of e-therapy, hybrid therapy

INTRODUCTION

The COVID-19 pandemic has significantly affected the functioning of health-care systems around the world. Activities in the field of digitisation in healthcare have been implemented in many countries for a long time. However, they were significantly accelerated in 2020 (Smith et al., 2020). In Poland, in response to the pandemic, legal regulations have been introduced. They enabled to use a telemedicine, including e-consultations and telerehabilitation, in a wider range. The need to take advantage of the opportunities in the field of e-health and improvement of health care in this situation has been highlighted. E-prescriptions, e-consultations, e-sick leaves were quickly accepted by society, while the sense of e-rehabilitation was subjected to long discussions. In response to the raised doubts, the Physiotherapy Evidence Database (PEDro), at the beginning of April 2020, made available collected systematic reviews regarding the effectiveness of telerehabilitation (Physiotherapy Evidence Database, 2020).

In official recommendations, in connection with the pandemic and situation of people with disabilities, the WHO appealed: "Provide a telehealth service for people with disabilities. (...) It may concern general needs, as well as rehabilitation needs (...)" (Światowa Organizacja Zdrowia, 2020, p. 142). A special patient is a child, who (due to the dynamic period of development) often cannot postpone rehabilitation. On the other hand, this is a patient, who requires much more supervision than an adult. Therefore, a therapy requires the involvement of a caregiver.

PURPOSE AND RESULTS

The purpose of this study was to analyse the possibility of conducting telerehabilitation among children with developmental age disorders (by their parents), as well as to evaluate its course and effectiveness. The work analyses the possibilities of telerehabilitation among children in Poland and compares them with reports from other countries. Parents of children who had undergone such a therapy were asked about their opinion.

The research was carried out in the years 2021-2022 at the Day Rehabilitation Center of the Provincial Specialist Hospital in Wrocław. A survey was conducted in a group of parents of patients rehabilitated during the pandemic via teleconsultations. The survey included questions about the advantages and disadvantages of telerehabilitation, the evaluation of its effectiveness and further prospects of such a therapy.

The survey was correctly filled by 60 people. In Poland, as in other countries, there are no standards for telerehabilitation of children, but the demand for such a therapy during the pandemic turned out to be very high. The most frequently used tools for telerehabilitation were WhatsApp and Skype. 56.7% of the respondents were satisfied and 16.7% of parents were dissatisfied with this form of therapy. 60% of the examined people reported that constant contact with a physiotherapist motivated them to carry out systematic exercises with a child at home. Moreover, they emphasised that they could discuss their doubts with the therapist, had a sense of continuity of therapy and appreciated the possibility of adjusting therapy hours to the rhythm of the day. As a disadvantage, 50% of patents indicated the child's lack of willingness to cooperate with a parent and worse focus on home therapy than in the medical institution. 36.7% of the respondents reported problems with the Internet connection or service of the online messenger. 16.7% of parents stated that they did not have adequate conditions for such a therapy at home. Only 6.7% of patients did not see any progress in rehabilitation. 26.7% of people observed a very big improvement and 20% – a big improvement. In the longer time, 3.3% of the respondents declared a desire for exclusive telerehabilitation, 13.3% – would never like to take advantage of this form of therapy again. 36.7% of patients would expect hybrid therapy: some classes in the institution and some classes within the framework of teleconsultations. 46.7% of the respondents reported that telerehabilitation is a valuable supplement when a child cannot come to the clinic for various reasons.

Parents of infants were the most satisfied. They emphasised the importance of the received care tips. The second group of satisfied people constitutes parents of school children, who were clearly interested in new technologies. This form of therapy was rated the worst by parents of children aged 2-4. The reason for such an evaluation was the child's lack of cooperation and problems with the child's attention.

DISCUSSION

Telemedicine is a form of healthcare provision involving the exchange of information regarding remote health care. In many countries, e-health systems are the foundation of flexible healthcare systems. They are based on technologies that enable and improve the remote provision of health services (Craig & Petterson, 2005). The concept of e-health includes a wide range of services, and the concept of e-health can be defined in different ways. In accordance with the definition of the World Health Organization (WHO), e-health is understood as the use of information and communication technologies in health (World Health Organization, 2020). In a broader sense, the concept of "e-health" refers to both technical and global developments, mindset, attitude and commitment to improve healthcare at the local, regional and global level – with the assistance of information and communication technologies (Kiberu, Mars, & Scott, 2017). E-health systems are used for the following actions: disease surveillance, health data acquisition and analysis, support for healthcare employees, teleconsulta-

tions, health tele-education, research, as well as patient management (Craig & Petterson, 2005).

The greatest advantage of such systems is the improvement of access to health care, as well as increase in its efficiency and quality. The use of e-health tools, such as: electronic medical records, e-prescriptions, e-sick notes, electronic drug management, as well as monitoring of chronic diseases, reduces healthcare costs and the risk of medical mistakes (Bacigalupe & Askari, 2013).

However, telemedicine also has disadvantages. There are still patients, who do not use the Internet. There is also concern regarding the stability of IT systems, the possibility of intercepting sensitive data and the security of such actions (Webster, 2020).

In Poland, e-health systems began to be widely implemented in 2019 – along with the improvement of the Internet Patient Account, the system of e-prescriptions and e-referrals. Then, the COVID-19 pandemic made e-consultations, tele-education, telemonitoring and telerehabilitation popular. This last form of remote actions was the most controversial. All over the world, there were doubts about the possibility of rehabilitating a patient without direct contact (Public Health England, 2020). However, during the COVID-19 pandemic, access to rehabilitation turned out to be one of the most significant problems, because rehabilitation services financed not only from public, but also from private funds, have been almost completely suspended. In Poland, the Headquarters of the National Health Fund issued a communication for service providers, effective from 11 April 2020. It enables the provision of telerehabilitation services by adding codes of medical procedures to the ICD-9 dictionary. These procedures were necessary to report and settle telerehabilitation services, such as: consultations and rehabilitation with the participation of a physiotherapist, free active exercises, as well as self-assisted and isometric exercises with the use of ICT or communication systems (Narodowy Fundusz Zdrowia, 2020).

The effectiveness of telerehabilitation was discussed not only in Poland. The best solutions were sought all over the world. The Australian Physiotherapy Association (APA), based on reliable scientific reports, has developed guidelines for telerehabilitation in connection with the COVID-19 pandemic (Australian Physiotherapy Association, 2020).

In New Zealand, the Physiotherapy New Zealand Association Council published a protocol of practice that can be used to evaluate whether a teleservice is sufficient or a face-to-face meeting is necessary in a given case (Physiotherapy New Zealand, 2020).

In the USA, telerehabilitation has been a recognised service for several years. The outbreak of the pandemic resulted in quick and effective activities of physiotherapists and patients applying for the coverage of costs by private insurers. Among other things, the largest private insurer – United Healthcare – agreed to this solution. On the website of the American Physical Therapy Association (APTA), you can find very extensive and detailed information package regarding telerehabilitation: comments of lawyers, a 21-page document describing billing procedures, possible challenges and opportunities for physiotherapists, telehealth

code of ethics and many other resources. APTA emphasised: “Document the legal and ethical reasons for conducting telerehabilitation services. While the COVID-19 pandemic is a good reason, you still need to document it” (American Physical Therapy Association, 2020, p.15).

In the UK, the need to maintain standards of record keeping was emphasized. Moreover, it was recommended to record conversations with patients. In the British public system, the so-called direct access to a physiotherapist, mainly for musculoskeletal disorders, is already developed. The Chartered Society of Physiotherapy (CSP) has developed a procedure protocol. It should be used for the initial evaluation of whether a given patient can be qualified for telerehabilitation or whether his or her condition is so serious that consultation in the office is necessary. At the beginning of April, CSP published a guide for quick implementation of remote consultations. In this document, you will find information related to the configuration of video equipment or ready-made tools commonly used for video conferencing (Chartered Society of Physiotherapy, 2020).

In Germany, despite the fact that the profession of physiotherapist is not regulated, the Physio Deutschland has published recommendations concerning the performance of “video procedures”. The following elements are necessary: patient’s informed consent, ensuring privacy, as well as the use of technology that enables good communication. The e-service can be realised if specific physiotherapeutic procedures have been recommended (Physio Deutschland, 2020).

In Austria, the Physio Austria took a slightly different approach. Although it was possible to obtain a refund for telerehabilitation during the pandemic, it was recommended only if the patient urgently required consultation and the service could not be provided in the office (Physio Austria, 2020).

A guide of good telerehabilitation practices appeared on the website of the French Chamber of Physiotherapists. It describes the platforms that are recommended by the Ministry of Health, as well as a reminder about the need to document services (Ordre des masseurs-kinésithérapeutes, 2020).

In Poland, the National Chamber of Physiotherapists has prepared two documents with guidelines and recommendations: 1. Guidelines for physiotherapists regarding the return to work and for patient concerning the return to physiotherapy after being sick during the pandemic. 2. Organisational recommendations for entities performing medical activities in the field of physiotherapy, including professional practices, during the pandemic in order to prevent the spread of the SARS-CoV-2 virus (Mrożek-Gąsiorowski, 2020).

Maciej Kochman and Magdalena Kołodziej reviewed and analysed the literature and indicated that telerehabilitation was conducted during the COVID-19 pandemic with the use of: phone call, mobile apps (WhatsApp) and videoconferencing on Skype, Zoom and FaceTime platforms. Forms of remote rehabilitation have been successfully used in many fields of physiotherapy: pulmonology (COVID-19), neurology, orthopedics, geriatrics, cardiology, oncology, sports medicine and pediatrics (Kochman & Kołodziej, 2020).

CONCLUSION

Pediatric telerehabilitation raised many discussions, because on the one hand, a child is a patient in an intensive phase of development, where urgent actions are most frequently taken, but on the other hand, this patient needs the supervision of another person (Kochman & Kołodziej, 2020). Usually, the parent becomes a therapist, who performs exercises assigned by the physiotherapist. Not every caregiver is able to repeat recommendations in a proper way, so the supervision during telerehabilitation may not be insufficient. Pediatric-specific solutions have not been found in reports from various countries. In Poland, a wide range of options was granted to healthcare providers – it is emphasised that the therapy must be selected in an individual way in order to ensure its effectiveness (Narodowy Fundusz Zdrowia, 2021). The effects of rehabilitation are often subjective, but the opinion of the caregiver is very important for their estimation. Therefore, in this study, parents of patients were asked for their opinions.

Telerehabilitation can be a valuable supplement to the traditional therapy for children with developmental age disorders. To ensure effectiveness, telerehabilitation requires very good cooperation between the therapist and the patient's parents and with the child himself. The therapy must be selected in an individual way in order to ensure its effectiveness.

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