

## **Abstract**

Leukemia is the most common cancer in childhood, making up 30-35% of all oncological diseases in children in the Czech Republic. The most frequent form of leukemia in pediatric patients is acute lymphoblastic leukemia (ALL). This form accounts for 80% of leukemia in children. Other types include acute myeloblastic leukemia (AML), myelodysplastic syndrome (MDS), and chronic myeloid leukemia (CML). Treatment is based on the type and subtype of leukemia diagnosed and usually lasts 1-2 years, provided there is no relapse. Primary treatment involves many side effects, including on the musculoskeletal system, such as chemotherapy-induced polyneuropathy (CIPN) or muscle myopathy as an adverse effect of glucocorticoid therapy. Part of the comprehensive treatment is supportive treatment, which includes rehabilitation (RHB).

The aim of this work is to find out and compare whether and under what conditions RHB in pediatric haemato-colongic patients is in the Czech Republic and selected countries of Europe, who and according to what patients RHB and whether clinics have any programs related to RHB in these patients.

The general part introduces the issue of pediatric patients with leukemia including the possibilities and adverse effects of treatment. The special part is devoted to research based on communication with clinics from the Czech Republic and selected countries of Europe, processing of results and brief introduction of clinics that provided the necessary information for processing.

In a survey abroad, 140 clinics from 30 European countries were contacted via email and later by phone call. The result is 13 responses from 12 foreign clinics (one duplicate). Answers from the Czech Republic were obtained with the help of Mgr. Filip Jevič and the missing answer in the form of a questionnaire sent by email.

The results show that in 11 out of 12 cases, RHB or aerobic burden is somehow part of the treatment of pediatric patients with leukemia.

The answers are varied and cover a wide range from a sophisticated comprehensive RHB program, including standardized tests, post-hospital RHB after-hospital outpatient RHB care, and RHB-only in-patient research, without follow-up RHB care.

A part of the thesis is a case report containing a summary of the course of rehabilitation treatment of a pediatric hematological patient from diagnosis to the current outpatient RHB in the Teaching Hospital Motol.