

## **Abstract**

**Title:** Comparison of performance of pediatric patients with diagnosis of cystic fibrosis before and after a lung transplantation.

**Objectives:** To compare selected parameters of pediatric patients as an index of physical condition in time before and 1 year after transplantation. To compare a group of patients that undergone longterm intensive physiotherapeutic treatment before transplantation with group of patients that did not using spirometric parameters FVC, FEV<sub>1</sub> and BMI. To compare subjective signs of dyspnea between these groups using selected questionnaires.

**Methods:** This theses was attended by 15 probands (7 boys and 8 girls) in age between 12 and 18 years. The data were collected by using selected dyspnea questionares and by using hospital documentation files taking place at the Motol University Hospital. The data were statistically analysed using Jamovi programme, mostly using correlations and paired T- test, and graphically analysed by using MS Excel programme.

**Results:** We found changes of spirometric parameters in the level of significance of  $p < 0,001$  (FEV<sub>1</sub>) and  $p = 0,003$  (FVC) after transplantation in comparison with time before transplantation. Group that undergone longterm intensive physiotherapeutic treatment before lung transplantation showed more physiological spirometric values in comparison with group without treatment. Group that undergone longterm intensive physiotherapeutic treatment before lung transplantation showed minor subjective signs of dyspnea 1 year after transplantation.

**Keywords:** lung transplantation, spirometry, respiratory physiotherapy, dyspnea