ABSTRACT

Objective: The paper deals with the evaluation of the status of pulmonary and postural functions of the patients with pectus carinatum. Further, it deals with the development of pulmonary and postural functions after Welch surgery.

Methods: Between the years 2010 and 2011 20 patients (19 men, 1 woman) went through Welch surgery at the Pediatric Clinic of the Faculty Hospital, Prague Motol. The average age of the group was 16,2 ± 1,2 years. Before surgery, pulmonary functions, respiratory muscle strength and posturography were evaluated. The received values were compared with the predicted, i.e. the controlled group, and in order to find mutual dependencies, also among themselves. 7 patients were repeatedly checked for pulmonary functions and posturography in the interval of 8,1 ± 3,0 months after their surgery. Pre and post – surgery values were compared.

Results: Dynamic and static hyperinflation and also an increased patency of periphery respiratory tracts was found in 20 pre-surgery patients with PC. Testing of respiratory muscle strength showed significantly lower values than the predicted. Checking for posturography revealed the differences in postural system resulting, especially with complicated postural demands, in medio-lateral instability of the body. Worsening of the balance functions corresponds with the increase of hyperinflation. Following Welch surgery, no significant change of pulmonary and postural functions was shown.

Conclusion: Dysfunction of the respiratory muscles was noticed in patients suffering from pectus carinatum, which expressed itself in clinically abnormal values of respiratory and balance functions. Welch surgery did not lead to the correction of abnormal values for pulmonary or postural functions.