

Abstract:

The diploma thesis aims to describe the functional disorders of the upper gastrointestinal tract with an emphasis on gastroesophageal reflux disease. The theoretical part describes the anatomy, pathophysiology, etiology of GERD and treatment options. In the practical part is measured postural reactivity of the diaphragm in the selected 15 probands with GERD. We measured the postural reactivity of the diaphragm using high resolution manometry in various postural situations: lying on the back with flexion of lower limbs above the surface, standing and standing on the AIREX mat, for standing patients, we used weights of 3,6 and 9 kilos inside and outside the center of gravity. Patients also completed the GERD Health-Related Quality of Life questionnaire.

The measurements confirmed an increase in resting pressure in all positions except standing, which correlated with the highest occurrence of reflux episodes in standing. The results were compared with a healthy control group. The activation of the crural part of the diaphragm was the same in both groups. We found in patients with GERD decreased coordination, delayed and influent activation of the crural diaphragm. The most significant increase in pressure in GERD patients occurred in the postural position of the flexed lower limbs and in standing position with 9 kg load outside of the center of gravity. In the position of the flexed lower limbs, the pressure increased from an average of 17.27 mm Hg to 36.53 mm Hg with a statistical significance of $p = 0.0012$. Rehabilitation of GERD patients results in improved sphincter, postural and respiratory function of the diaphragm.