Abstract

Background: Diaphragmatic evaluation is crucial in clinical practice, and no studies have reported the intraand interobserver reproducibilities of the radiographic method to evaluate diaphragmatic mobility. Objective: To analyze the reliability of radiographic measurement as a method for assessing the mobility of the left and right hemidiaphragms. Method: Forty-two patients, who were waiting for cholecystectomy surgery, were evaluated relative to the following parameters: physical examination, pulmonary function and radiographic evaluation. The measure of mobility of each hemidiaphragm was randomly determined by two physical therapists at two different times. The intra- and interobserver reproducibilities of the measurements were determined by the intraclass correlation coefficient (ICC[2,1]) and the 95% confidence interval (CI). The Bland-Altman plot was also used. The level of significance was 5%. Results: In the analysis of intra-observer reproducibility in radiographic evaluations of the left and right hemidiaphragms, ICC[2,1] indicated a “very high correlation” for both observer A (ICC[2,1] = 0.99, p <0.001 and ICC[2,1] = 0.97, p <0.001, respectively) and observer B (ICC[2,1] = 0.99, p <0.001 and ICC[2,1] = 0.99 p <0.001, respectively). In the analysis of interobserver reproducibility, the ICC[2,1] indicated a “very high correlation” for the 1st and 2nd radiographic evaluations of the right hemidiaphragm (ICC[2,1] = 0.98 and ICC[2,1] = 0.99, respectively, p <0.001) and left hemidiaphragm (ICC[2,1] = 0.98 and ICC[2,1] = 0.99, respectively, p <0.001). Conclusion: The intra and interobserver tests of the radiographic measure of mobility of the left and right hemidiaphragms showed high reliability.

Keywords
Physical therapy, diaphragm, radiographic, reproducibility of the tests.