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**Title:** Anxiety levels modifies thoracoabdominal mechanics in asthmatic patients

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**Body:** Psychiatric disorders such as anxiety and depression are common in patients with moderate and severe asthma and focus of various treatments; however, it remains unknown if these disorders modify respiratory mechanics. Objective: Investigate the influence of anxiety in the thoracoabdominal mechanics of patients with moderate or severe asthma. Methods: Twenty nine patients were enrolled, 16 with symptoms of anxiety (GA, 46±12 yrs, BMI=28.2±5.1kg/m<sup>2</sup>) and 13 without symptom (GN, 49± 10 yrs, BMI =28.6±4.1kg/m<sup>2</sup>). All patients were evaluated by the Hospital Anxiety and Depression Scale and thoracoabdominal kinematics (total chest wall, upper, lower ribcage and abdominal volumes) was measured by optoelectronic plethysmography. Student's t-test was used and significance level was set at 5%. Results: Total chest wall volume was similar between the groups during quiet (GN=410±120 vs. GA= 340±90 mL; p>0.05) and deep breathing (GN=1430±370 vs. GA=1420±410; p<0.05), however, GA showed a reduction in the abdominal volume during quiet (150±50 vs. 240±90mL; p<0.05) and deep breathing (370± 220 vs. 590±320 mL; p<0.05) when compared to GN. Conclusion: Anxiety modifies thoracoabdominal mechanics and promotes a lower abdominal volume during quiet and deep breath in asthmatics patients. No change was observed in thoracic volumes between both groups.