Factors associated with suggestive of pulmonary hypertension measured by echocardiography in patients with a mediastinal tumor: A single-center study

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Abstract

Background: Ultrasound techniques are generally not used as a primary tool in the evaluation of mediastinal tumors and cysts. This study aimed to identify factors associated with pulmonary hypertension (PH) measured by transthoracic echocardiography (TTE) in patients with a mediastinal tumor. Methods: This retrospective, observational study was performed from January 2015 to December 2020. Fifty-five patients (mean age, 62 ± 13 years; 31 [56%] women) who had a mediastinal tumor and underwent TTE were included. Patients were classified as with PH or without PH. We analyzed clinical factors and echocardiographic parameters. Results: PH was found in 21 (38%) patients. Twenty-two patients were asymptomatic, and none had symptoms associated with PH. Forty-seven (86%) patients underwent surgery, and 23 (42%) patients were diagnosed with malignant tumors. The presence of PH was not related with malignancy. Patients with PH were older than those without PH (67 ± 10 versus [vs.] 59 ± 14 years, $p = 0.017$). Small left ventricular (LV) systolic dimension (29.4 ± 3.6 vs. 31.6 ± 3.6 mm, $p = 0.040$) and dimension (4.2 ± 0.3 vs. 4.5 ± 0.3 mm, $p = 0.004$) and hyperdynamic LV ejection fraction (EF, 69 ± 6 vs. $65 \pm 5\%$, $p = 0.019$) were associated with PH. Among them, older age, small LV dimension, and high EF were independently associated with PH. Conclusion: The presence of PH had no significant effect on patients' clinical manifestation or malignancy.

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