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Title: Prevalence of pulmonary hypertension among outpatients with sarcoidosis: An echocardiographic and pulmonary catheterization study

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Body: BACKGROUND: Pulmonary hypertension (PH) has negative impact in sarcoidosis prognosis. Prevalence of pulmonary hypertension (PH) among patients with sarcoidosis has not been investigated by screening studies confirmed by hemodynamic evaluation. OBJECTIVES: (1) to determine the prevalence of PH among outpatients with sarcoidosis in a tertiary center and (2) compare the presence of systolic pulmonary artery pressure estimated by echocardiogram (SPAP) ≥ 40 mmHg to the diagnostic gold standard for PH (mean pulmonary artery pressure mPAP ≥ 25 mmHg) measured by pulmonary artery catheterization, in patients with tricuspid reflux velocity (TRV) ≥ 2.5 m/s. METHODS: Seventy-two consecutive patients of 163, from our outpatient sarcoidosis clinic (ATS/ERS criteria), underwent echocardiographic evaluation to assess TRV and to estimate SPAP. Patients with TRV ≥ 2.5 m/s (possible PH) underwent pulmonary artery catheterization. Lung function testing and high-resolution CT (HRCT) also were performed in all patients. RESULTS: Nineteen patients had TRV ≥ 2.5 m/s; 18 underwent hemodynamic evaluation (one patient died before the procedure). PH (mPAP ≥ 25 mmHg) was diagnosed in 4 patients and its prevalence was 5.6% (IC95% 0.2-10.8%). Five patients (6.9%), had SPAP ≥ 40 mmHg, estimated by echocardiography, but only two of them had PH (mPAP ≥ 25 mmHg); on the other hand, two patients with SPAP ≤ 40 mmHg, estimated by echocardiography, had PH in hemodynamic study. CONCLUSION: PH prevalence in outpatients with sarcoidosis was 5.6%. SPAP > 40 mmHg estimated by echocardiogram was not accurate to diagnose PH (3 false positive and 2 false negative).