

# **Echocardiographic Assessment of Systolic Pulmonary Arterial Pressure in HIV-Positive Patients**

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# Introduction

- Pulmonary hypertension occurs with increased frequency among patients with HIV infection.
- Although the pathogenesis of HIV-associated pulmonary hypertension remains unknown, it appears to occur independently of other risk factors associated with pulmonary vasculopathy,

# Introduction

- Pulmonary hypertension is rare but is one of the complications that occur due to HIV infection.
- Symptoms of HIV-associated pulmonary arterial hypertension are often non-specific but the main symptom of the disease is dyspnea

# Introduction

- HIV has been associated with multiple infectious and noninfectious pulmonary diseases.
- Better prophylaxis against opportunistic infections and longer survival, noninfectious complications, such as lymphocytic interstitial pneumonia, non-Hodgkin's lymphoma, and pulmonary hypertension, are becoming more prominent

# Materials and Methods

- In this cross-sectional study, we measured systolic pulmonary arterial pressure (SPAP) by echocardiographic methods among HIV-positive patients who received ART.
- This research is a descriptive, cross-sectional study of 170 HIV-positive patients that was conducted in Amir Alam & Imam-Khomeini Hospitals, Tehran, Iran during 2011-2013.

# Materials and Methods

- All patients regularly received antiretroviral therapy at least for recent 2 years.
- There were not any cardiopulmonary symptoms (cough, dyspnea, exertional fatigue and chest discomfort) in these patients.
- All participants underwent echocardiography to estimate SPAP

# Results

- The participants comprised 108 males (63.5%) and 62 females (46.5%).
- The mean age of patients was 41 years old.
- Mean duration of HIV infection was 5.5 years. The mean CD4 cell count was 401cell/ $\mu$ l.
- The principal regimen of HAART included two nucleoside reverse transcriptase inhibitor (NRTI) and one non-nucleoside reverse transcriptase inhibitor (NNRTI) in the hospital.

# Results

- The mean of systolic pulmonary arterial pressure was 25 mmHg in the participants
- 156 (93.4%) of them had SPAP  $\leq$ 30mmHg (normal)
- Six (3.6%) had SPAP: 31-35mmHg (borderline)
- Five (3%) had SPAP  $>$  35 mmHg (pulmonary hypertension).



# Results

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- Also, antiretroviral therapy was not a risk factor for pulmonary hypertension in this study

# conclusion

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- Also, antiretroviral therapy was not a risk factor for pulmonary hypertension in this study.





