Pulmonary arterial hypertension and HIV

Researchers in Madrid, Spain, investigated almost 400 HIV-positive people for the presence of pulmonary arterial hypertension (PAH) using cardiac ultrasound scans. They found a relatively high rate of PAH—about 10%. PAH was most likely to occur in the following groups of people:

- women
- people co-infected with HIV and hepatitis C virus (HCV)
- people with untreated HIV infection

Study details

Researchers recruited 392 participants at random between October 2009 and April 2011 for this study. The average profile of participants when they entered the study was as follows:

- 83% men, 17% women
- age – 47 years
- duration of HIV infection – 13 years
- CD4+ count - 577 cells
- lowest-ever CD4+ count – 277 cells
- proportion taking ART – 84%
- proportion of ART users with an undetectable viral load – 76%
- HCV co-infection – 29%
- HBV co-infection – 5%

Results

A total of 39 people (about 10% of participants) had a diagnosis of PAH based on echocardiography graded as follows:

- mild – 25 participants
- moderate – 11 participants
- severe – 3 participants

Most participants (30 out of 39) were symptom free and their PAH was graded as mild or moderate. Symptoms in the remaining nine participants were as follows:

- shortness of breath
- chest pain
- fainting

In conducting their analysis, researchers found that factors such as age, length of HIV infection, CD4+ counts (current or lowest ever), duration of ART, presence of type 2 diabetes, smoking tobacco, high blood pressure and co-infection with HBV were not linked to PAH. No specific anti-HIV therapy or class of therapy was associated with PAH. However, the following factors were linked to an increased risk for PAH:

- gender – being female
- having HCV co-infection
- having a detectable HIV viral load

Chronic HCV infection damages the liver, and in cases of cirrhosis (severe liver damage) other research teams have
found that PAH can occur, affecting between 4% and 16% of people.

The Madrid team recommends that all HIV-positive patients be evaluated for PAH, particularly those who are co-infected with HCV and also those whose HIV infection remains untreated. Echocardiograms could be an initial non-invasive method of assessing this, although such scans are not wholly accurate.

**Resource:**

To learn more about pulmonary arterial hypertension, visit the [Pulmonary Hypertension Association of Canada](#) website

**REFERENCES:**

Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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