

## 胸痛とうつ病は共通の神経化学的経路を有する可能性がある (ESC2015 Presentation # 4301)

冠動脈疾患の有無にかかわらず、うつ病の重症度は胸痛の頻度と独立して相関がある

Severity of depression was independently associated with the frequency of chest pain in patients with and without underlying coronary artery disease

うつ病患者は冠動脈疾患がなくても胸痛頻度が高いとのEmory Cardiovascular Biobankの結果が2015年ESC Congressで発表された。スタディは成人5,825人を対象とし、平均年齢63歳、男性は65%であった。その結果、うつ病の重症度は胸痛頻度と独立して相関があり、より重度のうつ病患者はより頻回の胸痛を有することが示された。軽度のうつ病であっても、うつ症状のない患者に比べ胸痛頻度が高かった。この結果は、冠動脈疾患重症度、年齢、性別、人種および喫煙の有無、ボディーマスインデックス、血圧、血中脂質レベルなどの従来の心血管リスクファクターで補正してもなお認められた。うつ病患者はうつ病のない患者に比べ胸痛を有する頻度が3倍高かった。これは冠動脈狭窄の有無に関わらず当てはまった。追跡調査で、うつ症状の軽減が胸痛頻度の低下に関連していた。しかし1年後の追跡調査で、血行再建術を施行されたうつ病患者は胸痛頻度の減少が認められなかった。これらの結果から、疼痛とうつ病は共通の神経化学的経路を有している可能性が示唆された。

### Full Text

Depressed patients have more frequent chest pain even in the absence of coronary artery disease, according to results from the Emory Cardiovascular Biobank presented at ESC Congress by Dr. Salim Hayek, a cardiologist at Emory University School of Medicine in Atlanta, Georgia, US. The findings suggest that pain and depression may share a common neurochemical pathway.

"Depression is a common and well recognized risk factor for the development of heart disease," said Dr. Hayek. "Patients with known heart disease and depression tend to experience chest pain more frequently. However until now, it was not known whether that association was dependent on underlying coronary artery disease."

The current study assessed whether depression was associated with chest pain independently of underlying coronary artery disease. The study included 5 825 adults enrolled in the Emory Cardiovascular Biobank between 2004 and 2013. The biobank is a prospective registry of patients undergoing cardiac catheterization at three Emory Healthcare sites in Atlanta.

Patients had an average age of 63 years, 65% were male and 22% were African Americans. Prior to cardiac catheterization patients completed the Patient Health Questionnaire-9 (PHQ-9) to assess depressive symptoms and the Seattle Angina Questionnaire to assess chest pain frequency in the past month. The presence and severity of coronary artery disease was determined by angiogram. Patients completed the same questionnaires at one and five years post-procedure.

The researchers found that depression severity as measured by the PHQ-9 was independently associated with the frequency of chest pain, indicating that patients with more severe depression had more frequent chest pain. Even patients with mild depression had more frequent chest pain than patients with no depressive symptoms. The findings remained after adjusting for coronary artery disease severity, age, gender, race and traditional cardiovascular risk factors including smoking status, body mass index, blood pressure and blood lipid levels.

Patients with depression, whether women or men, were three times more likely to experience more frequent chest pain than those without depression. This was found to be true in patients with and without obstructive coronary artery disease.

A reduction in the severity of depression symptoms was associated with a decrease in the frequency of chest pain at follow-up. Most importantly, patients with depression who underwent revascularization did not have an improvement in chest pain frequency at 1-year follow-up.

"We found that depression is strongly associated with the frequency of chest pain in adults with and without underlying coronary artery disease, and that patients with depression and heart disease did not have an improvement in their chest pain frequency even after coronary intervention" said Dr. Hayek.

"One possible explanation for our findings is that pain and depression share a common neurochemical pathway." He added: "Although depression is established as a risk factor for heart disease, there are no clear recommendations in the US for depression screening in patients with cardiovascular disease. ESC prevention guidelines recommend assessing patients for depression to prevent cardiovascular disease."

Although our findings do not establish causality, they do suggest that depression is an important confounder of the relationship between chest pain and heart disease. Screening for depression in patients presenting with chest pain should be considered, and studies examining the effect of appropriate anti-depressive therapy on chest pain are needed."

Dr. Hayek concluded: "The fact that chest pain frequency at follow-up was decreased in patients whose depressive symptoms improved indicates that treating depression may help alleviate chest pain, after obstructive coronary artery disease as a cause of chest pain has been ruled out. This needs to be confirmed in randomized controlled trials."

Dr. Hayek is supported by the Katz Family Foundation Preventive Cardiology Grant (Atlanta, GA).

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