DEPRESSION and HYPERTENSION

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Agenda

• assessment OF Depression
• Cardiovascular disease (CVD) and depression
• DEPRESSION AND HYPERTENSION
• DEPRESSION AND pulmonary HYPERTENSION
• NICE GUIDE LINE
• TAKE HOME MESSAGE
Depression assessment

done by psychiatric specialist Using

• Hamilton Depression Rating Scale (HAM-D) (Hamilton, 1959)
• a validated depression scale
• DMS 5

The Hamilton rating scale For depression
The Hamilton rating scale for depression (to be administered by a health care professional)

1. **DEPRESSED MOOD** (Sadness, hopeless, helpless, worthless)
   - 0 = Absent
   - 1 = These feeling states indicated only on questioning
   - 2 = These feeling states spontaneously reported verbally
   - 3 = Communicates feeling states non-verbally—i.e., through facial expression, posture, voice, and tendency to weep
   - 4 = Patient reports VIRTUALLY ONLY these feeling states in his spontaneous verbal and non-verbal communication

2. FEELINGS OF SILENCE

3.

4.

5.

6.

7.

8.

9.

10.

11.
no Arabic version of the questionnaires is available
Sum scores from the first 18 items.

- 0-7 = Normal
- 8-13 = Mild depression
- 14-18 = Moderate depression
- 19-22 = Severe depression
- >23 = very severe depression.

Cardiovascular disease (CVD) and depression

I. Persons with depression are more likely to eventually develop CVD and also have a higher mortality rate than general population.

II. There is a graded relationship; the more severe the depression, the higher the subsequent risk of mortality and the cardiovascular events (Jhansson et al, 2013).

III. Preventing and managing depression is important for cardiac patients who fulfill criteria for major depressive disorders. This require sensitive detection, accurate diagnosis, and careful management.
Prevalence of Depression in Cardiac Patients

- CAD: 45%
- HF: 36%
- ICD: 28%
- CABG: 40%

DEPRESSION AND HYPERTENSION
Because hypertension and depression share common pathways, it is possible that each disease has an impact on the natural history of the other.
To determinate whether depression influences blood pressure control in hypertensive patients

- **40 hypertensive patients** undergoing antihypertensive treatment, excluding beta-blockers and central-acting agents,
- **their blood pressure** several times a day for three days using a validated, commercially available device.
- **All patients** also completed the Zung Self-rating Depression Scale survey for depression.
- **Associations between** the results of the blood pressure and depression tests were

**RESULTS**

- Of the 40 patients, **23 were** depressed,
- and **21 of these 23** had poor control of their blood pressure.
- A significant correlation between systolic (r=0.713) and diastolic (r=0.52) blood pressure values and depression was found.

**CONCLUSION:**

- Depression is common in patients with uncontrolled hypertension
- it may interfere with blood pressure control.
- Screening for depression in hypertensive patients is a simple and cost-effective tool that may improve outcomes.
Depression Is Associated With Decreased Blood Pressure, but Antidepressant Use Increases the Risk for Hypertension

*Hypertension* April 2009

- *study compared* blood pressure levels between subjects with clinical anxiety and depressive disorders with healthy controls
- *Participants were classified* as
  - *controls (N590)*
  - or currently *depressed or anxious subjects (N2028)*, of which *1384 were not* and *644 were using antidepressants*
- *stage 1*
- *Users of noradrenergic and serotonergic working antidepressants were more likely to have hypertension stage 1.*
• **Higher mean diastolic blood pressure** was found among the current anxious subjects (P<0.03),
• although anxiety was not significantly related to hypertension risk. Remitted and **current depressed** subjects had a lower
• **mean systolic blood pressure** (1.74, P<0.04 and
• and were significantly less likely to have isolated systolic hypertension than controls.
• Users of tricyclic antidepressants had higher mean systolic and diastolic blood pressures and were more likely to have hypertension

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**Effect of anxiety and depression on blood pressure: 11-year longitudinal population study**

*British Journal of Psychiatry Jul 2008, 193 (2) 108-*

• Data on **36 530** men and women
• **aged 20–78 years** participating in the Nord-Trøndelag Health Study (HUNT) in **Norway**
• in 1984–86 were re-examined **11 years** later.
Results

A high symptom level of anxiety and depression at baseline predicted:

1. There was **low systolic blood pressure** at follow-up.

2. Change in symptom level of anxiety and depression between baseline and follow-up **was inversely associated** with change in systolic blood pressure.

3. For diastolic blood pressure, the findings were weaker or non-significant.

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30% of Pulmonary Hypertension Patients Experience Depression or Anxiety, JANUARY 25, 2018

**Study Shows**

- 77% of the patients were women.
- their disease was PAH Class II or III according to the New York Heart Association.
- Thirty percent reported symptoms of depression or anxiety.
- Sixteen percent reported symptoms of major depression.
- and 9 percent symptoms of other depressive disorders.
- 8 percent Symptoms of panic disorder.
- 4 percent symptoms of other anxiety disorders.
• percentage of patients with a major depressive disorder was higher than in the general population

• they wrote. “When applicable, PAH clinicians [doctors] should refer patients to a mental health professional, with ongoing evaluation of clinical outcomes.”

Conclusions of the study

• Symptoms of anxiety and depression predicted lower blood pressure 11 years later.

• Whether symptoms of anxiety and depression contribute to the development of hypertension has been addressed in several studies, but with inconclusive results. A few studies using change in mean blood pressure as outcome found mostly no effect.
Relationship Between **Blood Pressure Values**, **Depressive Symptoms**, and **Cardiovascular Outcomes in Patients With Cardiometabolic Disease**

*The Journal of Clinical Hypertension* Vol 18 | No 10 | **October 2016**

• SBP and depressive symptoms at baseline were independent predictors of a MACE at 4 years in patients with existing cardiometabolic disease, while DBP at baseline did not have a significant effect.

The Association between Hypertension, and Depression and Anxiety Disorders: Results from a Nationally-Representative Sample of South African Adults

*May 2009* | Volume 4 | Issue 5 | e5552

• Data come from a nationally-representative survey of adults (n = 4351)
• There is a high prevalence of hypertension and mental health disorders in South Africa.
Data come from a nationally-representative survey of adults (n = 4351).

The Composite International Diagnostic Interview was used to measure DSM-IV mental disorders during the previous 12-months.

- Depressive disorders and comorbid anxiety-depression were assessed including experience of trauma and other chronic physical conditions:
  - 16.7% reported a previous medical diagnosis of hypertension,
  - 8.1% and 4.9% were found to have a 12-month anxiety or depressive disorder, respectively.

As a conclusion of the research:
There is a high prevalence of hypertension and mental health disorders in South Africa.

The relationship between hypertension and anxiety or depression in Hong Kong Chinese

Our study of individuals randomly selected from the community and patients from a hypertensive clinic

We conclude that hypertension is associated with anxiety but not depression.
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JANUARY 25, 2018

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NICE guideline2018

I. consider treating the anxiety disorder first
II. people with mild depression do not need an intervention
III. Sleep hygiene: establishing regular sleep and wake times, avoiding excess eating
Take home message

- Depression is extremely common in patients with Cardiovascular Disease with up 47% and pulmonary hypertension
- Depression is associated with increased risk of morbidity and mortality
- Arabic version of the questionnaires is mandatory
- Pharmacologic and psychotherapeutic interventions appear to be safe and could be effective in reducing depressive symptoms in patients with cardiac disease
- The impact on cardiac outcomes remains unclear
- There is obvious need for large-scale safety and efficacy trials in this field

Thank You