Feelings of Depression or Hopelessness Are Associated With Sexual Dysfunction and Hypogonadal Symptoms

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Disclosures

• I have no relevant financial relationships to disclose
Background

- Hormonal, physiological, and psychological factors influence sexual and endocrine function.

- The relationship between sexual dysfunction, hypogonadal and depressive symptoms is incompletely understood.

- Lack of large studies comparing depression, hypogonadal symptoms, and sexual dysfunction.
Aim

• To examine the relationship between depressive symptoms and the severity of sexual dysfunction and hypogonadal symptoms
Approach

Men presenting between July 2014 – February 2015 (n=451)

Mild to Moderate Depressive Sx
PHQ-9 <15 (n=308)

Moderate to Severe Depressive Sx
PHQ-9 ≥15 (n=141)

Comparison of Depressive Symptoms (PHQ-9)
Hypogonadal Symptoms (ADAM, qADAM)
Sexual Dysfunction (IIEF)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Depressed (n=143)</th>
<th>Not Depressed (n=315)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>45.7 ± 11.6</td>
<td>46.6 ± 10.6</td>
<td>0.42</td>
</tr>
<tr>
<td>Free testosterone (ng/dL)</td>
<td>17.6 ± 13.9</td>
<td>17.5 ± 12.3</td>
<td>0.57</td>
</tr>
<tr>
<td>Serum testosterone (ng/dL)</td>
<td>688.3 ± 458.5</td>
<td>749.0 ± 463.2</td>
<td>0.09</td>
</tr>
<tr>
<td>Total cholesterol (mg/dL)</td>
<td>189.0 ± 39.9</td>
<td>184.0 ± 38.6</td>
<td>0.44</td>
</tr>
<tr>
<td>Triglycerides (mg/dL)</td>
<td>202.3 ± 223.4</td>
<td>177.2 ± 140.7</td>
<td>0.15</td>
</tr>
<tr>
<td>LDL/HDL ratio</td>
<td>2.7 ± 1.7</td>
<td>2.5 ± 1.3</td>
<td>0.11</td>
</tr>
<tr>
<td>IGF-1 (ng/mL)</td>
<td>165.1 ± 54.9</td>
<td>162.6 ± 59.5</td>
<td>0.87</td>
</tr>
<tr>
<td>HTN</td>
<td>14%</td>
<td>15%</td>
<td>0.85</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>14%</td>
<td>10%</td>
<td>0.12</td>
</tr>
<tr>
<td>Hypothyroid</td>
<td>4%</td>
<td>3%</td>
<td>0.49</td>
</tr>
<tr>
<td>Erectile Dysfunction</td>
<td>44%</td>
<td>41%</td>
<td>0.18</td>
</tr>
</tbody>
</table>
Men with Depressive Symptoms Have Worse Hypogonadal Symptoms

- Depressed (PHQ-9 ≥15)
- Not Depressed (PHQ-9 < 15)

- ADAM Score
- qADAM Score

p<0.001
Men with Depressive Symptoms Have Worse Sexual Dysfunction

Total IIEF Score

Depressed (PHQ-9 ≥ 15)

Not Depressed (PHQ-9 < 15)

p<0.01
Depressive Symptoms Predict Sexual Dysfunction and Hypogonadal Symptoms

- Feelings of depression or hopelessness predicted:
  - **Sexual dysfunction** → $B=10.5$, 95% CI: -13.5, -7.4, $p<0.001$,
  - **Number of hypogonadal symptoms** → $B=3.1$, 95% CI: 2.6-3.6, $p<0.001$
  - **Severity of hypogonadal symptoms** → $B=6.2$, 95% CI: -7.2, -5.1, $p<0.001$

- Independent of age and testosterone level
Summary

• Depressive symptoms are associated with hypogonadal symptoms and sexual dysfunction in men

• Depressive symptoms predict severity of sexual dysfunction and hypogonadal symptoms

• Understanding the relationship between symptoms can facilitate an appropriate approach to affected patients and provide additional options for therapy