Men and women with chronic major depression responded differently to sertraline and imipramine


QUESTION: Do men and women with chronic depression have different treatment responses to selective serotonin reuptake inhibitors (SSRIs) (eg, sertraline) and tricyclic antidepressants (TCAs) (eg, imipramine)?

Design
Randomised [allocation concealed††], blinded [clinicians, patients, and outcome assessors]†*, controlled trial with 12 weeks of follow up.

Setting
10 university medical centres and 2 clinical research centres in the US.

Patients
400 women (mean age 40 y) and 235 men (mean age 43 y) who were 21–65 years of age and met DSM-III-R criteria for chronic major depression or double depression. Follow up was 80%; analysis of all patients was done using last observation carried forward.

Sertraline and imipramine for chronic major depression at 12 weeks; Table 1 Sertraline v imipramine in women

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Sertraline</th>
<th>Imipramine</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout rate</td>
<td>14%</td>
<td>26%</td>
<td>47% (20 to 65)</td>
<td>9 (5 to 24)</td>
</tr>
<tr>
<td>Treatment response</td>
<td>57%</td>
<td>46%</td>
<td>23% (0.46 to 54)</td>
<td>10 (5 to 435)</td>
</tr>
</tbody>
</table>

Table 2 Imipramine v sertraline in men

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Imipramine</th>
<th>Sertraline</th>
<th>RRR (CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout rate</td>
<td>19%</td>
<td>24%</td>
<td>20% (0.34 to 54)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Treatment response</td>
<td>62%</td>
<td>45%</td>
<td>37% (6.2 to 75)</td>
<td>6 (4 to 35)</td>
</tr>
</tbody>
</table>

TABLE 2 Imipramine v sertraline in men

Outcomes | Imipramine | Sertraline | RRR (CI) | NNT (CI)
---|------------|------------|----------|----------|
Dropout rate | 19% | 24% | 20% (0.34 to 54) | Not significant |
Treatment response | 62% | 45% | 37% (6.2 to 75) | 6 (4 to 35) |

COMPANION TEXT

As we all know, men and women are different. One of these sex differences occurs in mood disorders: depression is approximately twice as common in women as in men. Mood disorder in women is also a subject of serious academic study and the focus of a major new textbook.1 The increase in depression rates in women becomes evident after puberty, and it is argued that the difference lessens after menopause. Given these findings, sex based differences in treatment response are of great interest. Such differences are important because unipolar depression is such a large public health problem, ranking second in developed market economies in recent global burden of disease studies.2

Previous studies have suggested that women might be more responsive to serotonergic agents, and the study by Kornstein et al is a timely addition to this literature. It shows fairly convincingly that women have a better response to SSRIs and men a better response to TCAs. The authors comment on the possible reasons for this, especially because the differing response rate was observed primarily in premenopausal women. Obviously, the female sex hormones and the menstrual cycle may play a role in determining this phenomenon. This finding has potentially important implications for clinical practice. Although reasons still exist (eg, side effect profile, safety in overdose) to choose an SSRI as a first line agent in men, this study reminds us that TCAs may still have a place in psychiatry, and that sex should be added to the list of factors to consider when selecting an antidepressant. This study was completed under contract from Pfizer Pharmaceuticals, the makers of sertraline, and this article may enhance the sales profile of sertraline. The relationship between the pharmaceutical industry and medical academics has recently come under the spotlight.3 Because of the clear commercial implications and potentially increased healthcare costs, it is important that this study be independently replicated.

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Evid Based Mental Health 2001 4: 114
doi: 10.1136/ebmh.4.4.114

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