Delusional-Nondelusional Dichotomy in Major Depression

M. Farid, R. Aljamal and A. Fawzy

Whether delusional depression represents the most severe form of an endogenous depression or is a discrete disease entity is an unsettled issue. Recently, considerable attention has been paid to psychotic or delusional depression, and there have been suggestions that it should be seen as a distinct clinical subtype of major depression.

This study was designed to investigate such distinction through studying some clinical and psychosocial factors in 62 outpatients suffering from major depression and classified as delusional (13 patients) vs non-delusional (49 patients).

The response to tricyclic antidepressants, the consistency in the delusional evolution from episode to episode, family history of major depression and the degree of social and overall functioning were found in this study to suggest that delusional depression might best be considered a separate nosologic entity. Further studies comparing delusional with nondelusional depressed patients is necessary to make this distinction more valid.


Introduction

Since the time of Hippocrates, physicians have recognized that some patients become delusional when they are depressed (Goshen, 1967). Earlier in this century, Kraepelin (1921) noted that "delusions are in manic-depressive insanity very frequent, especially in states of depression".

Hoch and MacCurdy (1922) questioned whether the presence or absence of delusions influenced outcome among depressed patients. Reviewing their cases, they suggested that the presence of absurd ideas in depression predicted poor prognosis. Between their original report and the introduction of electroconvulsive therapy in 1935, a number of authors commented about the relevance of delusions, their observations were of particular interest because they were undisturbed by any somatic treatment. Kantor and Glassman (1977) reported that, in untreated major affective disorder, non-recovery was a rare event, but when it did occur, it did so among the delusional female patients. With the introduction of ECT, the prognostic relevance of delusions disappeared. Numerous studies emphasized that patients with melancholic symptoms had a good response to ECT regardless of either severity or the presence of delusions. Only patients with paranoid symptoms in the absence of an affective component did not seem to re-

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respond favorably (Huston and Locher, 1948; Kalinowsky 1948).

By the late 1950s, when the tricyclic antidepressant drugs were first introduced, psychiatrists expected that delusional and non-delusional depressives would respond equally. Despite this expectation, several investigators noted that the depressed patients with delusions seemed to respond to tricyclic antidepressants less frequently than did the non-delusional patients (Hoff, 1959; Friedman and Angsl 1961). However, these observations were generally ignored until 1975 when Glassman et al., reported that delusional unipolar depressives treated with imipramine were less responsive than nondelusional unipolar depressives.

Avery and Lubrano (1979) studied more than 400 patients with various types of depression who were treated with large doses of imipramine (200-350 mgs for 28 days). They found that the response rate of the delusional depressives was 40% compared with almost 70% for the non-delusional depressives.

Several reports have commented on the efficacy of combining a tricyclic antidepressant and an antipsychotic in the treatment of delusional depression (Nelson and Bowers, 1978; Minter and Mandel, 1979; Kaskey et al., 1980; Charney and Nelson, 1981). In these investigations, about 81% of the patients treated with a combination of these medications were responders. They suggested that the combination of a tricyclic antidepressant with an antipsychotic is superior to treatment with either one alone. The use of antipsychotics alone to treat delusional patients is much less well studied. Several early studies reported that anxious or agitated depressed patients responded favorably to various phenothiazines (Overall et al., 1964 and Hollister et al., 1967). The results of these studies were conflicting as some (Minter and Mandel, 1979; Moradi et al., 1979) reported a positive response to antipsychotics while others (Kaskey et al., 1980; Charney and Nelson, 1981) had reports of negative response. In these studies, 48 of patients treated with an antipsychotic alone were responders. Depressed patients with delusions were also found to respond well to electroconvulsive therapy (Crow et al., 1984).

There are, however, a number of reports suggesting that the abandonment of tricyclic antidepressants in the treatment of deluded depressives might be premature (Quikin et al., 1978). Also, Howarth and Grace (1985) have criticized these studies on the ground that patients were not given enough medications and were not treated for a sufficient period of time.

They suggested that depressed patients with delusions treated with a tricyclic antidepressant, would improve as well as nondelusional depressives treated with a similar medication, provided high doses were used for a sufficient time. They recommended that a clinician faced with a lack of response to tricyclics in a deluded depressive patient had the option of continuing the treatment for some time rather than resorting to ECT.

The phenomenology of psychotic depression was found to be similar to endogenous depression (Nelson and Bowers, 1978). Whether psychotic depression represents the most severe form of an endogenous depression or is a discrete disease entity is an unsettled issue (Frances et al. 1981 and Athanassenas et al., 1983).

The main target of this study is to investigate the possible distinction of major depression into delusional versus non-delusional subtypes through shedding light on the demographic, clinical and psychosocial factors that may help in clarifying such distinction.
Subjects and Methods

Sample

The subjects selected for this study were male and female outpatients collected from the psychiatric outpatient department of Mansoura University Hospital. All of them had DSM IV diagnosis of major depression, non-psychotic or psychotic, with or without melancholia and were seriously depressed (score greater than 18 on the Hamilton Depression Rating Scale).

Patients - to enter this study - have to satisfy the following criteria:

1. Diagnosis of major depressive episode according to DSM-IV criteria made by two qualified psychiatrists.

2. Patients have either a pure major depressive episode, or major depression with psychotic features on the basis of the presence of delusions, which were defined as (convictions in beliefs which almost certainly are not true and which are not shared with members of subject's religious or cultural subgroups). Also, the delusions had to have a severity rating of 4 or more on the 6-point scale in the Schedule for Affective Disorders and Schizophrenia (SADS) (Endicott and Spitzer, 1978) which rates severity of delusions.

3. Patients who presented either with their first depressive episode or in relapse.

Patients were excluded from the study when they were found to have bipolar disorder, substance related disorder, history of schizophrenia, mental retardation or mental disorders due to general medical conditions.

Design

A total of 62 patients met the study criteria, 49 with non-delusional depression and 13 with delusional depression.

Each was subjected to

1- Assessment of the severity of the depressive episode with the aid of Hamilton Rating Scale for Depression (Hamilton, 1960). Assessment was done by taking the average of two raters.

2- Gathering demographic, psychosocial, and family history data from the patient and his relatives.

3- Thorough clinical evaluation with the aid of the Schedule for Affective Disorder and Schizophrenia. This clinical interview was accomplished within the first two days of the presentation.

4- After completing the baseline evaluation, all patients were treated in a similar way. They received an adequate trial of a tricyclic antidepressant (imipramine). The dose was started with 100mgs. per day in divided doses and then increased gradually by 50mg steps every week, the dose might be increased up to a maximum of 250 mgs/day, based on the patient's response to treatment. No patient should be deemed non-responder until tried on 250 mgs per day for 4 weeks.

Imipramine was selected in this study because of its longest history of use and considerable research evidence is available for the efficacy of this treatments.

Patients were evaluated once weekly and improvement was assessed clinically and with the help of Hamilton Depression Rating Scale.

At whatever point in this treatment regimen the patient had fulfilled the criteria of recovery, the dose was fixed as it is and the patient continued to take it for additional 16 weeks after which the dose was stopped gradually.

Criteria for Recovery

A patient was defined as recovered when there is:

1- Agreement among the patient,
close family or friends, and the treating staff that he was recovered and essentially back to his or her premorbid self and,

2- Absence of DSM- IV symptoms for major depression and its subtypes or with minor symptoms in a mild degree which would not have qualified the patient to enter the study and,

3- Score of 8 or less on the Hamilton Rating Scale for Depression.

Recovered patients were subjected to the following assessments

1- Assessment of personality disorders with the aid of the Personality Assessment Form "PAF" (Shea et al., 1987).

2- Assessment of the life events that were encountered during the last 2 years prior to intake into the study through the use of Life Events Questionnaire "LEQ" (Horeowitz et al., 1977).

3- Measurement of the degree of social support with the aid of Duke Social Support Index "DSSI" (Landerman et al., 1989).

4- Assessment of social functioning and overall level of functioning during the last 2 years prior to intake into the study using the Social functioning and Overall level of Functioning Scales "SFS & OLES" (Endicott and Spitzer, 1978).

The non-recovered patients were asked to complete the previously mentioned investigations when they had achieved the same criteria of recovery on subsequent alternative treatment (ECT).

In this manner, the assessment of the non-recovered could be done in the remitted state, aiming at minimizing the effect of the depressive state on our measurements.

All patients (recovered and non-recovered) were studied for clinical variables e.g: number of previous episodes, severity of the index episode and its duration before intake into the study, symptom profile and presence or absence of delusions and also for social factors e.g.: life events, social support and adaptive functioning as well as for their response to pharmacotherapy.

Results

Out of a total number of 62 patients 49(79%) were non-delusional compared to 13 (21% delusional. The recovery from major depression was found to be significantly affected by the subtyping of depression into delusional versus non-delusional as evidenced by a significant Chi-square value of 4.92 (<0.05).

The rate of recovery of patients with non-delusional major depression was significantly higher than that of those with delusional depression (77.6% and 46.2% respectively.)

<table>
<thead>
<tr>
<th>Recovery</th>
<th>Delusional</th>
<th>Delusional</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%)</td>
<td>No. (%)</td>
<td></td>
</tr>
<tr>
<td>Recovered</td>
<td>6(16.2%)</td>
<td>38(77.6%)</td>
<td>44(71%)</td>
</tr>
<tr>
<td>Non-Recovered</td>
<td>7(53.8%)</td>
<td>11(22.4%)</td>
<td>18(29%)</td>
</tr>
<tr>
<td>Total</td>
<td>13(100%)</td>
<td>49(100%)</td>
<td>62(100%)</td>
</tr>
</tbody>
</table>

* Significant at the level of 0.05.
Table 2
Some Clinical Variables In Delusional Versus Non-Delusional Depression

<table>
<thead>
<tr>
<th>Clinical Variables</th>
<th>Delusional Depression</th>
<th>Non-Delusional Depression</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age At Onset of First Episode (Mean ± SD)</td>
<td>42.37 (±7.8)</td>
<td>42.33 (±8.4)</td>
<td>P &gt; 0.05</td>
</tr>
<tr>
<td>Duration of Illness before Intake (Mean ± SD) &quot;in weeks&quot;</td>
<td>10.21 (±5.1)</td>
<td>12.14 (±7.9)</td>
<td>P &gt; 0.05</td>
</tr>
<tr>
<td>Severity of Illness on HDRS (Mean ± SD)</td>
<td>33.06 (±3.1)</td>
<td>30.14 (±2.7)</td>
<td>P &lt; 0.05*</td>
</tr>
<tr>
<td>Melancholic Symptoms No (%)</td>
<td>9 (69.2%)</td>
<td>25 (51%)</td>
<td>(Insig.)</td>
</tr>
<tr>
<td>Anxiety Symptoms No (%)</td>
<td>8 (61.5%)</td>
<td>27 (55.1%)</td>
<td>(Insig.)</td>
</tr>
<tr>
<td>Family History of Major Depression No (%)</td>
<td>2 (15.4%)</td>
<td>24 (49%)</td>
<td>Z = 1.17</td>
</tr>
<tr>
<td>Personality Disorders (using PAF) No (%)</td>
<td>7 (53.8%)</td>
<td>21 (42.9%)</td>
<td>Z = 0.7</td>
</tr>
</tbody>
</table>

* Significant at the level of 0.05.
- PAF: Personality Assessment Form.

Table 3
Some Social Variables In Delusional Versus Non-Delusional Depression

<table>
<thead>
<tr>
<th>Some Social Variables</th>
<th>Delusional Depression</th>
<th>Non-Delusional Depression</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Events Questionaire (Mean ± SD)</td>
<td>80.7 (±30.8)</td>
<td>92.3 (±53.5)</td>
<td>P &gt; 0.05</td>
</tr>
<tr>
<td>Duke Subjective Social Support Index (Mean ± SD)</td>
<td>18.13 (±4.5)</td>
<td>18.22 (±3.7)</td>
<td>P &gt; 0.05</td>
</tr>
<tr>
<td>Social Functioning Scale (Mean ± SD)</td>
<td>5.03 (±1.5)</td>
<td>3.03 (±1.1)</td>
<td>P &lt; 0.01**</td>
</tr>
<tr>
<td>Overall Level of Functioning Scale (Mean ± SD)</td>
<td>4.04 (±1.2)</td>
<td>2.3 (±1.02)</td>
<td>P &lt; 0.05*</td>
</tr>
</tbody>
</table>

* Significant at the level of 0.05.
** Significant at the level of 0.01.

Table 4
Frequency of Previous Episodes In Delusional Versus Non-Delusional Depression.

<table>
<thead>
<tr>
<th>No. of Previous Episodes</th>
<th>Delusional Depression</th>
<th>Non-Delusional Depression</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean ± SD</td>
<td>1.37 (±0.9)</td>
<td>2.46 (±1.7)</td>
<td>&lt; 0.05*</td>
</tr>
</tbody>
</table>

* Significant at the level of 0.05.
Table 5

Nature of Previous Episodes In Delusional Versus Non-Delusional Depression

<table>
<thead>
<tr>
<th>Previous Episodes</th>
<th>Delusional Depression</th>
<th>NON-Delusional Depression</th>
<th>Total</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delusional Episodes</td>
<td>15 (88.2%)</td>
<td>12 (10%)</td>
<td>27 (19.7%)</td>
<td>57.6***</td>
</tr>
<tr>
<td>Non-Delusional Episodes</td>
<td>2</td>
<td>108 (90%)</td>
<td>110 (80.3%)</td>
<td>&lt;0.01**</td>
</tr>
</tbody>
</table>
| Total | 17 (100%) | 120 (100%) | 137 (100%) | *** Significant at the level of 0.001. ** Significant at the level of 0.01.

Patients with nondelusional major depression were significantly more likely to have family history of major depression (49%) than patients with delusional major depression (15.4%) while patients with delusional major depression showed significantly greater severity scores (on the Hamilton Depression Rating Scale) than non-delusional depressives (33.06±3.1 Vs 30.14±2.7).

The relationship of the severity of depression and the appearance of delusions was demonstrated by a positive correlation between depression scores on the Hamilton Depression Rating Scale and the delusional score of the Schedule for Affective Disorders and Schizophrenia (SADS): r= 0.195 and t= 2.2 (p<0.05).

Patients with delusional depression showed significantly higher impairment in social and overall level of functioning than patients with nondelusional depression (5.03±1.5 and 4.04 ± 1.2 Vs 3.03±1.1 and 2.3 ± 1.02 respectively).

Patients with delusional major depression were found to have significantly lower number of previous episodes (1.37±0.9) than patients with nondelusional major depression (2.40±1.7).

Regarding the nature of the previous episodes, it was found that 88.2% of the previous episodes for patients with delusional depression were delusional compared to 11.8% nondelusional. On the other hand, 90% of previous episodes for patients with nondelusional depression were nondelusional in nature, while only 10% were delusional.

Discussion

Recently, considerable attention has been paid to psychotic or delusional depression and there have been suggestions that it should be seen as a distinct clinical subtype of major depression (Schutzberg and Rothschild, 1992).

In this study, patients with delusional depression were found to have significantly poorer rates of recovery than nondelusional depressives to the extent that the presence of delusions was a significant predictor of poor recovery. This finding is consistent with the findings of some previous studies (Spiker et al., 1985; Lykouras et al., 1986 and Johnson et al., 1991), while it was contradictory to the findings of Howarth and Grace (1985) who criticized other studies on the ground that patients were not given enough medication and were not treated for a sufficient period. The adequate trial of treatment used in this current study and other studies that used higher doses of antidepressants for longer periods argues against this previous finding. Spiker et al., (1985) have speculated that patients with delusional depression might have abnormalities in both the dopamine and norepinephrine neurotran-
smmitter systems and they demonstrated that patients taking a combination of an antidepressant and an antipsychotic had superior recovery rates than patients taking antidepressants alone.

Furthermore, they found that delusional depressed patients who failed to respond to antipsychotics would still be depressed but not delusional. Similarly, nonresponders to antidepressants alone, would still be delusional but not depressed. Another possible reason for the greater response rate of patients taking antidepressants plus antipsychotics was discussed by Nelson and Jatlow (1980) who reported that these patients had higher plasma levels of antidepressants than patients taking antidepressants alone.

They demonstrated that phenothiazines raise the plasma levels of tricyclic antidepressants when given together.

The nosological status of delusional depression remains in question. Is delusional depression best considered as a severe variant of major depression or as a separate entity with a characteristic pattern of demographic and clinical feature, family history, course, biochemical profile, and response to treatment? In the current study, delusional patients were found to have more severe depression compared to nondelusional patients, also, severity of depression was found to be positively correlated with the delusional score. So, one possible explanation is that the delusional patients did not respond to tricyclic antidepressants because their depression was more severe, perhaps with more biochemical disturbance and resistant to tricyclic antidepressants. Although this finding could be interpreted as supporting the notion that delusional depression is merely a more severe variant of depression, a number of investigators have argued that delusional depression is a separate disorder. They have also identified patients with nondelusional major depression who had total Hamilton depression scores in the range seen among patients with delusional major depression but with good response. Thus, the development of delusions must rest on risk factors of biological processes other than the severity of depression (Glassman and Roose, 1981).

In this study, a proposal was made to define two different ways to conceptualize the relationship between severity and delusions. The less likely one would suggest that delusions are indicators of severity; that is, as the depression becomes severe, delusions emerge. Anyone with a severe, depressive episode could have delusions developing because delusions are a function of severity, not of a special vulnerability of the person.

A more acceptable alternative explanation is that the presence of delusions is a distinct pathological trait dependent on intrinsic individual susceptibility, but influenced in its expression by other factors, including perhaps illness severity. So, the most likely explanation is that these deluded patients inherently recovered more slowly, suggesting an intrinsic difference between the two forms of depression. In this second explanation, delusions are seen as a concomitant process that occurs in certain vulnerable depressives. This process is likely to contaminate the Hamilton rating and produce higher average scores.

Comparing the development and clinical course of depression in the delusional and nondelusional patients, this study did not find any significant differences between the two groups regarding age of onset of depressive illness, clinical variables, personality variables, life stresses and social support. Delusional patients, on the other hand, were found to have fewer prior episodes, less family history of major depression and lower social and overall levels of functioning. A more
striking finding is that, the prior depressive episodes of the delusional patients were mostly delusional (88.2%). this finding of the consistency in the delusional evolution from episode to episode in delusional patients supports this study's suggestion that the emergence of delusions represents a trait and not simply illness severity.

The finding of the current study that delusional patients has poor social and overall levels of functioning before intake into the study is in agreement with Coryell et al. (1990) who reported significantly greater social impairment in patients with delusional major depression. This finding together with our finding that these patients had fewer previous episodes is in need for explanation. It is possible that depressed patients with delusions should be classified as schizophremics or schizoaffective psychosis, but the exclusion criteria used in this study helped to minimize this risk. It is also possible that there is no such phenomenon as a primary depressive illness with delusions, but that the delusions are a function of a slowly developing psychotic process and the depressive disorder is always secondary. We might speculate that depressive mood is a reaction to the coming psychotic process, or when it occurs temporally before the delusions, it represents a syndrome of the onset of thought disorder, just as it may be the first symptom of other diseases such as cancer, endocrine dysfunction and some organic brain syndrome. So, the poor social and overall functioning found in these patients could be attributed to this slowly developing sub-symptomatic psychotic process. Further follow-up studies for longer periods and more accurate family studies are still needed to make this suggestion valid.

Summary & Conclusions
The target of this study is to investigate whether delusional depression represents a clinical variety of major depression or a distinct clinical entity through analyzing different clinical and psychosocial factors.

The poor response to tricyclic antidepressants, the consistency in the delusional evolution from episode to episode, the less family history of major depression and the poor social and overall functioning and the fewer number of previous episodes found in this study suggest that delusional depression might best be considered a separate nosologic entity. Further studies comparing delusional with nondelusional depression is necessary to make this distinction more valid.

References
Delusional-Nondelusional Dichotomy in Major Depression


Kraepelin, E. (1921) Manic Depressive Insanity and Paranoia- Translated by Barclay, R.M. Edinburgh, Livingstone.


Minter, R.E. and Mandel, M.R. (1979) The Treatment of Psychotic Major Depres-
Depression majeur avec délire et depression majeur sans délire

Cette étude essaye de trouver les différences qui se présente entre une groupe des malades souffrant de majeur depressif et une autre groupe des malades souffrant de majeur depressif avec délire sans délire et ceci, au point de vue de l'importance diagnostique, clinical et thérapeutiques.
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