# Rate of Suicide Attempt in the Course of Bipolar Disorder: An unexpected outcome in a follow-up study

In this longitudinal and prospective study, the clinical course of patients who suffered from bipolar I disorder and were admitted to Iran Psychiatric hospital due to the first episode of mania has been evaluated. The subjects' mother language was Persian. They aged 18 and older, and resided in Tehran, Karaj or the suburbs. Subjects who fulfilled these criteria and were diagnosed in their first manic or mixed episode of bipolar I disorder based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders-4<sup>th</sup> edition-text revised (DSM-IV) were included in this study(1). Consent was obtained from all the participants.

Subjects entered the study within a period of approximately 21 months, from November 2003 to August 2005. During the study, subjects who were diagnosed in their first manic or mixed episode by a psychiatrist were referred to another psychiatrist. If there was a consensus on the diagnosis, subjects entered the study and were followed by one of the psychiatrists of the research team. This study was carried out within 32.5 months. Subjects were observed for 8 - 24 months (mean±SD=17.0±5.3). They were asked to refer for a monthly visit during the first year and every other month during the second year respectively. An active follow up protocol was devised. In the event that the subjects did not attend their visits, the physician in charge called them three times to remind them or their families of the visit. If the patients failed to refer even after the follow up, a telephone interview was then substituted.

Data was collected by clinical interview using DSM-IV-TR criteria checklist and some other questionnaires. Important events such as suicide attempt and its similar behaviors were registered by a psychiatrist. During the study period, subjects had an option to change their psychiatrist. None of the subjects were charged during the study.

The comprehensive report of the study has been published (2).

# Results

The diagnosis of one subject (4.3%) changed after 3 months of evaluation. Therefore, the data of 22 subjects was reported. Participants included 11 males and 11 females patients aged 19.6 - 59 (m=28.4±10.4). Most of them were single and had not yet finished high school education. Subjects did not hold any history of medical conditions. Four subjects used nicotine, one had a history of alcohol abuse, one indicated recent cannabis intoxication and two subjects (9.1%) suffered from concomitant anxiety disorders. Recurrence of a mood episode occurred in 9 (40.9%) subjects. The

emergence of mixed episode and rapid cycling were not observed in participants (2).

Four subjects had attempted suicide before entering the study (18.2%). Two subjects attempted suicide during the current episode of mania (one by drug overdose and one by jumping in front of a car). Another subject with the diagnosis of depressive disorder- not otherwise specified- had attempts in two consecutive days (with unknown methods) and the other subject with no axis I diagnosis had one attempt of drug overdose.

Interestingly, no more suicide attempts were observed during the  $17.0\pm5.3$  follow-up months in the 22 subjects. In addition, no homicide occurred during the follow-up.

## Discussion

It has been reported that the suicide rate in bipolar disordered patients is 12 times greater than the general population (3). According to several studies, the lifetime prevalence of suicide attempt is 9-19% in major depressive disorder, 10-18% in bipolar I disorder and 18-56% in bipolar II disorder with the mean of 12, 17 and 24 percent respectively (4). The absence of suicide attempts during  $17.0\pm5.3$  months in a group of bipolar I disordered patient (18% of whom had already a history of prior attempts) was highly unexpected even though they have been under treatment. Although the prevalence of this behavior in bipolar disorder is unknown in the Iranian population, some hypotheses could explain this unexpected finding:

1- This behavior may have not been reported by the patients' families, this has been seen in other studies elsewhere too. The differences in culture can hardly explain the difference in reporting the attempt, especially when the 18% attempted suicide report prior to the study is taken into consideration. Furthermore, subjects were followed continuously by their therapists through face to face or telephone interviews. Therefore, the problem of non-reporting (in comparison to other studies) is not a reasonable cause for the absence of suicide attempts during the study.

2- It may reflect the low liability for suicide in bipolar patients in this particular geographical area (the suburbs of Tehran or even Iran). In accordance with the existing evidence, it is not possible to approve or reject this hypothesis and it needs to be evaluated.

3- Suicide risk factors such as comorbidities with other axis I disorders and/or substance abuse, early onset beginning of the disorder, the presence of mixed episodes and rapid cycling course (5) were not common in our subjects. Thus, the subjects of this study may belong to a specific subgroup of bipolar patients who had a low risk of attempting or committing suicide. 4- Perhaps the low incidence of suicide among subjects could be explained by the effect of particular care provided and the follow-up procedures including the therapists' continuous contact with patients' families, the experience of the study's psychiatrists in managing patients and other particular available facilities.

The last two possibilities seem more reasonable. The possibility that the study subjects belong to a certain group of patients who have good prognoses (and hold a low risk of suicide) may be somehow a logical explanation but the 41% recurrence of mood episode within 17.0±5.3 months of follow-up does not reflect a good prognosis. On the other hand, it should be noted that the mentioned risk factors have been generally evaluated in retrospective studies and they need to be approved in longitudinal studies. In a recent prospective and longitudinal study in bipolar I and II, the history of attempt to suicide, hopelessness and depressive phase were found to be the cardinal risk factors for suicide (6). Therefore, more studies are needed to determine the predictive factors of this behavior.

In the authors' opinion, the last possibility is the most likely. However, we have to consider the low sample size as a limitation of this study.

Patients need care more than what is usually and routinely provided in Iran's hospitals. Taking into account the devastating personal, social and economical costs of suicide attempts, a planned program, sufficient budgets to educate therapists, provision of public care and qualified comprehensive therapeutic services should be considered crucial. It should be reminded that suicide is merely one of the annihilative effects of bipolar disorder and providing essential care for these patients bears several other reasons (7-8).

#### Acknowledgement

This report is a part of a project entitled "The Course and Outcome Study of Bipolar Disordered Patients Admitted to Iran Psychiatric Hospital", which was supported by a grant from Mental Health Research Centre and Tehran Psychiatric Institute. We thank Dr. Badri Daneshamouz, Dr. Hamidreza Ahmadkhaniha, Dr. Mitra Hakim Shooshtari, and Dr. Mirfarhad Ghalebandi for visiting the patients and collecting the data. Also, we thank Dr. Leily Panaghi for performing the statistical analysis. We further express our gratitude to all of the psychiatrists and the residents who referred the subjects and to all of the patients and their families who kindly helped us.

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