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Brief report

Risk of suicide and mixed episode in men in the postpartum period

Luciana Quevedo [a,e], Ricardo Azevedo da Silva [a], Fábio Coelho [a], Karen Amaral Tavares Pinheiro [a], Bernardo Lessa Horta [b], Flávio Kapczinski [c], Ricardo Tavares Pinheiro [a,d,*]

[a] Postgraduate Programme in Health and Behaviour, Catholic University of Pelotas, Brazil
[b] Postgraduate Programme in Epidemiology, Federal University of Pelotas, Brazil
[c] Bipolar Disorder Program, Laboratory of Molecular Psychiatry, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
[d] PQ-National Research Council, CNPQ, Brazil
[e] National Institutes for Science and Technology (INCTs), INCT for Translational Medicine, Brazil

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ABSTRACT

Objectives: To assess suicide risk in men with mood disorders at the postpartum period.
Methods: We conduct a longitudinal study with 650 men whose child has born from April 2007 to May 2008 at maternity hospital. The first assessment was in the antenatal period and the second within 30 to 60 days postpartum. Suicide risk, anxiety disorders, hypomanic, manic and mixed episodes were assessed by the Mini International Neuropsychiatric Interview (MINI).
Results: The prevalence of suicide risk in fathers in postpartum was of 4.8%. Fathers with postpartum depression were 20.97 (CI: 5.74; 76.53) more likely to present suicide risk and those with mixed episodes showed a chance of 46.50 (CI: 10.52; 205.53) times higher than those who did not suffer from any mood disorder.
Conclusion: Mixed episodes are common in fathers at postpartum, posing a higher suicide risk than depressive and manic/hypomanic episodes. Therefore, in order to reduce the suicide risk, clinicians should address and treat adequately mixed affective states in this specific population.

1. Introduction

Suicide receives increasing attention worldwide, and many countries are developing national strategies for prevention. Most people who commit suicide have psychiatric disorders, notably mood, substance-related, anxiety, psychotic, and personality disorders (Hawton and Heeringen, 2009; Neves et al., 2009).

Recent reviews have shown that the lifetime risk of suicide for affective disorder is 6–15% and the possibility of dying by suicide in unipolar major depression and bipolar disorder is 20 and 15 times higher, respectively, than would be expected (Hawton and Heeringen, 2009; Rihmer, 2001; Perugi et al., 2001; Akiskal et al., 2005). The bipolar mixed state is an affective condition in which manic and depressive symptoms are simultaneously present (Perugi et al., 2001; Akiskal et al., 2005; Olgiati et al., 2006). When elevated symptoms of both poles interact, feelings of hopelessness and psychic suffering can lead to desire to die or kill (Moreno and Moreno, 2005). The mixed depressive episode increases the risk of all forms of suicidal behaviour in both unipolar and bipolar depression (Moreno and Moreno, 2005; Balázs et al., 2006; Khalsa et al., 2008).

The onset of bipolar disorder has been found to be associated with stressful life events (Kessing et al., 2004). Significant changes such as the birth of a child can bring stress response in individuals (Deave et al., 2008). Paternal postpartum mood disturbance has been assumed to be rare and has not, until recently, attracted much attention (Munk-Olsen et al., 2006). On the other hand, there is some evidence on its long-term consequence, psychosocial development is impaired among children whose fathers presented postpartum mood disturbance (Ramchandani et al., 2008). Studies on suicide risk

* Correspondig author. Postgraduate Programme in Health and Behaviour, Catholic University of Pelotas, Rua Almirante Barroso, 1202, Pelotas, RS 96010-280, Brazil.
E-mail address: ricardop@terra.com.br (R.T. Pinheiro).

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in men in the postpartum period are scarce. Our objective was to assess suicide risk in men who experience episodes of mood change at the postpartum period.

2. Methods

This is a longitudinal study with men whose child has born from April 2007 to May 2008 maternity wards in the city of Pelotas and whose partners had received prenatal care by Brazilian National System of Public Health. The first assessment was in the prenatal period and the second within 30 to 60 days postpartum. The sample size was established using the EpiInfo software, given a reliability of 95% and power of 80%. We expected a prevalence of depression in men of 5% in general and 12% at the postpartum period, (estimated risk of 2.25) (Pinheiro et al., 2006). The projected sample size required was 726 men. We also included an additional of 10% in the sample value to balance for losses and refusals, as well as to control for confounding factors.

The suicide risk, anxiety disorders, hypomanic, manic and mixed episodes were assessed by the Mini International Neuropsychiatric Interview (MINI). The MINI is a short structured interview with adequate validity and reliability (Amorim, 2000). The suicidality section inquires about several components of suicide risk with the following questions: Over the last month: 1) Have you wished you were dead? (Score: 1 point); 2) Have you wanted to harm yourself? (2 points); 3) Have you thought of committing suicide? (6 points); 4) Have you planned how to commit suicide? (10 points); 5) Have you attempted suicide? (10 points), and 6) Have you ever attempted suicide? (4 points). The risk for suicide range was "low" (score 1–5), "moderate" (score 6–9) and "high" (score e>10). For analysis, the scores were dichotomized as absent (low or absent risk) or presence (moderate or high risk), as recommended by the MINI authors (Sheehan et al., 1998).We excluded from analysis those men who had previous suicide risk and others mood disorders.

Episodes of mood disturbance at the postpartum period were divided into the following categories: a) no disorder: men who never had depressive, manic or hypomanic episodes during pregnancy or partner's postpartum; b) hypomania: men with hypomanic episodes in the postpartum; c) mania: manic episodes in the postpartum; d) parents who had postpartum depression, without previous or current manic or hypomanic episodes; and e) mixed: men who had manic or hypomanic and depressive symptoms concurrently at postpartum.

In addition to the diagnostic interview, the fathers answered a questionnaire about socioeconomic status and use of alcohol and tobacco. We used the classification of the Brazilian Association of Research Companies (ABEP) (Associação Brasileira de Empresas em Pesquisa (ABEP), 2009) to assess the socioeconomic status of families. This classification is based on the accumulation of material wealth and schooling of household head, classifying the subjects into five levels (A, B, C, D and E).

Chi-square test was used in the comparison between proportions. Logistic regression was employed to control for possible confounding factors. The statistical analysis was realized in the SPSS 10.0 for Windows.

All subjects gave written informed consent for the analysis and anonymous publication of research findings.

3. Results

We identified 726 men in the antenatal care. Fifty seven were excluded from analysis by having previous suicide risk or other mood disorders. Of these, 650 (89.5%) were found in the postpartum period and prevalence of suicide risk was of 4.8%. As for mood disorders, 2.7% of fathers were hippomanic, 2.5% were manic, 2.6% were depressed and 1.7% had mixed episodes. Thus, the prevalence of mood disorders (bipolar and unipolar) was 9.5%.

Table 1 shows sample's distribution. The raw analysis showed no significant difference in the suicide risk according to age, social class, living with a partner, primiparity and alcohol abuse ($p>0.05$).

The suicide risk was associated with the mood episodes of the partner ($p=0.049$), anxiety disorders ($p<0.001$) and episodes of mood changes ($p<0,001$). Those variables that were associated with suicide risk were used for multivariate analysis, by having a $p\leq 0.20$.

After adjusting for possible confounding variables, the suicide risk remained associated only with episodes of mood changes at the postpartum period ($p<0.001$). As for mood episodes in the postpartum period, the suicide risk was related to pure depressive episodes ($p<0.001$) and mixed episodes ($p<0.001$). Fathers with postpartum depression were 20.97 (CI: 5.74; 76.53) more likely to evidence a suicide risk and those with mixed episodes postpartum showed a chance of 46.50 (10.52; 205.53) times higher than those who did not suffer from any mood disorder.

4. Discussion

Suicide is a human behaviour with multiple causes, including several biological and psychosocial components, and it is well recognized that among its risk factors, the most powerful is previous suicide attempt(s) and/or the presence of major mental disorder (Rihmer, 2001; Fu et al., 2002). We noticed that the episodes arise after the childbirth because the parents were interviewed before and after delivery, and those subjects who reported previous suicide risk in the antenatal visit were excluded from the analysis.

Research has shown that the transition to parenthood is a stressful life event (Olgiati et al., 2006). The prevalence of suicide risk in men in the first assessment was 2.8%. In the postpartum was 4.8% and these had no risk in the first evaluation. Exposure to stressful life events can trigger the first episodes of mania or mixed affective episode. Suicidal risk acts are precipitated by stressors such as life events (Kessing et al., 2004; Maria et al., 2004).

Many studies show a relationship between depression and the suicide risk, but the most important aspect of our findings was the hypothesis that the suicide risk in men in the postpartum period comes mainly from mixed episodes, which can lead to a chance of suicide almost two times higher than the non-mixed depression. In a previous study comparing with the other phases of the disorder, the incidence of suicide risk was 37-fold higher [95% (CI) (RR): 11.8–120.3] during combined mixed and depressive mixed states, and 18-fold higher (95% CI: 6.5–50.8) during major depressive phases (Valtonen et al., 2008).

Factors such as comorbid anxiety disorders and partner's depressive symptoms in the postpartum period were initially