

Successful Suicide in a Child: Depression-Related or Paroxetine-Induced?

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ABSTRACT

Background: Children and adolescents are prone to develop psychiatric problems after stressful life events. These problems need appropriate treatment because of negative consequences like disease-related suicide. Antidepressants (especially "Serotonin Selective Reuptake Inhibitors") are common treatments for psychiatric problems of children and adolescents; but different side effects, including drug-induced suicide, have been reported.

Case Report: In this article, we describe a nine-year-old girl who developed depression after parental divorce and was prescribed paroxetine. During pharmacotherapy, she had suicidal thoughts and several unsuccessful attempts which have been neglected and finally last attempt was successful. This report is an evidence for physicians to prescribe antidepressants cautiously with reasonable indication. As still there is no certain contraindication of using antidepressants in pediatric patients, importance of follow-ups and screening of suicide in pediatric patients during treatment with antidepressants seems essential.

Conclusion: This study discloses the magnitude of explaining the side effects of antidepressants to caregivers of children with psychiatric problems.

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► *Implication for health policy/practice/research/medical education:* Successful Suicide in a Child: Depression-Related or Paroxetine-Induced?

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1. Introduction:

Depression among children and adolescents can be related to behavioral impairments and suicide; although non-pharmacological treatments are usually first line, prescription of antidepressants _especially "Serotonin Selective Reuptake Inhibitors" (SSRIs) _ is

growing in recent years. A reason for such a growing use can be the psychiatrists' reluctance to deliver psychotherapy to patients (1, 2). Stressful life events such as parental divorce during childhood can alter the mental health of children and adolescents and cause psychological disorders (3). Among children and adolescents, 2-8% will experience depression; One third of depressed children may have suicide attempts and 3-4% of them will complete suicide (4). SSRIs (including fluoxetine, citalopram, paroxetine and sertraline),

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Norepinephrine-Serotonin Reuptake Inhibitors (NSRIs), Monoamine Oxidase Inhibitors (MAOIs) and Tricyclic Antidepressants (TCAs) are common antidepressive agents prescribed for children and adolescents (1, 5). A big concern about antidepressants, especially in children, is the increased risk of suicide. SSRIs and NSRIs, especially more recent drugs in these two categories, are causing more concerns (5-7). In this case report we describe a successful suicide in a child with depression six months after initiating paroxetine. We briefly review relevant articles about the relationship between suicide and antidepressants.

2. Case Report:

A 9-year-old girl was admitted to emergency ward of a hospital in Tehran, because of multiple traumas due to intentional fall from the sixth floor of an apartment. At the time of admission, she was in deep coma and hemorrhagic shock. There were hip fracture, intracranial hemorrhage, hemoperitoneum and hemothorax. Bilateral chest tubes were fixed and she underwent emergent splenectomy. She hospitalized in ICU for four days, but despite all cares, she died. Her corpse was referred to the forensic medicine department for inspection. At autopsy, there was no evidence of violence or sexual abuse. Brain contusion, subdural and subarachnoid hemorrhages were seen. Finally, based on available evidence, the cause of death was confirmed as "multiple traumas" caused by suicide. Victim was a known case of Major Depressive Disorder and received paroxetin (10 mg/day). Her parents separated one year beforehand and she lived with her mother thereafter. They were in low socioeconomical status. Subsequent to parental separation, she developed symptoms like isolation, school failure, problems in relationship with peers and anorexia. There was no previous history of medical and psychological problems. Symptoms existed for about six months and have been exacerbating progressively. Based on her teacher's recommendation, she referred to a psychiatrist. After ruling out of internal problems, psychiatrist diagnosed her problem as "Major Depression" and

prescribed paroxetine 10mg/day along with consulting sessions with a psychoanalyst. Because of her mother's low affordability, she did not receive consultation. After one month of using paroxetine with the dose of 10 mg/day, no change in her symptoms was observed and psychiatrist increased the dose to 20mg/day but no other additional medications were prescribed. Doctor emphasized on frequent follow-up visits and informed mother about probable side effects of paroxetine, particularly anxiety. Unfortunately, suicide has not been mentioned as the most serious side effect. The victim received paroxetine for six months and short after increasing the dose of paroxetine mother observed behavioral changes, including anxiety, hyperactivity, increased appetite and insomnia. These symptoms were reported to doctor but based on his opinion there was no need to additional drugs and control and supportive measures were recommended. New symptoms have been exacerbating gradually and during the last month of her life, victim occasionally talked about suicide by jumping from the roof of their apartment, but her mother did not consider them as self-limited anxiotic symptoms and didn't report them. The victim tried to jump several times during the last week of her life, but her attempts were cancelled out by her mother, although the last attempt was successful and she completed suicide six months after initiation of paroxetine. During the six months of paroxetine consumption, victim underwent only two follow-up visits and mother repeated the drug without prescription.

3. Discussion:

Depression in children and adolescents can negatively affect their development, quality of life and causes problems in their adulthood. A serious concern is an inherent direct relationship between depression and suicide, which clarifies the necessity of appropriate treatment (1, 8-10). First line treatments for depression among children are non-pharmacological approaches, including "Cognitive-Behavioral Therapies" and strategies to reduce stress. When these

approaches do not work, antidepressants – usually SSRIs – are recommended. Unfortunately, because of low resources to deliver non-pharmacological treatments to patients, the use of antidepressants is growing (2, 11). Although antidepressants (especially SSRIs) are widely prescribed to treat depression and prevent depression-induced suicide, they are highly doubted to increase the risk of suicide especially in pediatric patients (12, 13). Existing studies on the relationship between suicide and antidepressants are diverse with different results and there are a lot of controversies (1, 7, 14, 15, 16). Several studies report increased risk of suicide with antidepressants, especially SSRIs, in children and adolescents (1, 6, 7, 14, 15, 17-19). Contra wise, other studies report that SSRIs decrease suicide rates in children and adolescents; In fact these studies relate suicide with underlying psychiatric disorders and report decreased rates of suicide during treatment with SSRIs because of their therapeutic effects (7, 11, 20-22). Most studies in the literature are about the increased rates of suicides with antidepressants and limited reports on the preventive role of antidepressants for depression-related suicides are available; although publication bias should be in mind (6, 11). Based on available documents, different categories of antidepressants have similar risks of suicide in children and adolescents. In fact, despite more concerns about new SSRIs, studies report no difference in suicide rates between older SSRIs like fluoxetine and new ones like paroxetine (5, 7, 19, 23-25). Paroxetine has been mentioned as one of the effective drugs for treatment of depression with higher efficacy in children and adolescents compared to adults (1); but have caused concerns because of attributed suicides, especially in pediatric setting (26). There are reports of more suicide events in children and adolescents with major depressive disorder during treatment with paroxetine, compared to placebo (6, 7, 10, 12, 14, 23, 27-29).

Despite numerous articles about the advantages and side effects of different antidepressants, there are no decisive

evidence of association between antidepressants and suicide (6, 16, 30); therefore, none of antidepressive agents are contraindicated for pediatric patients (6). Benefits of antidepressants for pediatric depression are not negligible, although the suicide risk is still a worrisome problem (30). During prescribing an antidepressant, clinicians should weigh advantages and side effects of that drug; but usually the risk of adverse consequences of untreated or undertreated depression is higher than the risk of drug-induced suicide. Clinicians should always have a smaller risk of drug-induced suicide in mind and carefully try to minimize it (6, 17, 26, 31). As a result, children and adolescents taking paroxetine and other SSRIs should be under close monitoring. Parents or caregivers of these patients should be informed about the side effects of these drugs in detail, and clinicians should clearly emphasize on suicide ideations or attempts as a serious side effect which must be immediately reported for emergent intervention and even hospitalization. It is recommended that all drugs delivered to patients have warning labels that can be easily understood by caregivers in pediatric setting (6, 10, 31, 32). Because history of previous suicide ideations or attempts is a major risk factor for successful consequent suicide, routine and frequent screening for suicide ideation and attempts among children and adolescents during treatment with all antidepressants seems valuable and this can be best achieved by accurate follow-up (1, 7, 9, 33). Suicide screening has also been proposed for patients during treatment with paroxetine (10).

Treatment with antidepressants is a prolonged process and to set monitoring programs for patients, we need to know the critical time for suicide risk during the course of pharmacotherapy; this issue has been studied in a few articles. These articles report different results but gathering all their results, the risk of suicide during the course of antidepressants begins from the first day and is especially higher in the first month (6, 7, 11, 15, 16, 20, 25). Majority of suicides happen during the first six months of treatment and after this time, the risk

declines (34); but it should never be ignored as there are reports of suicides even 3 months after completion of treatment with SSRIs (18). While interpreting studies which focus on the first month as the critical time, we face two limitations that reveals the need for further studies: First is that, most participants in these studies haven't been following during the total course of treatment, therefore data about suicide risk has been just available for the time they were under observation and no data about later risks has been in hand. This can overestimate the short term risk of suicide (6). Second is that, most antidepressants (particularly SSRIs), take 2 - 4 weeks to act; therefore, drug-induced excess risk of suicide during the first month of treatment _which is a focus of many articles_ is uncertain (7). According to literature, considering this case and the fact that SSRIs usually takes six months to reduce suicidal risk (34), the most conservative strategy is that: monitoring and screening for suicide during treatment with SSRIs, should begin from the first day of drug initiation and continue during the treatment period with intense attention during the first six months of pharmacotherapy (25).

4. Conclusion:

Antidepressants are "double-edged swords": While they are used to treat depression and prevent disease-induced suicide; the most hazardous side effect of them may also be suicidal. Due to absence of follow-up in this the reason of suicide in this case (disease-related or drug-induced) remains questionable. Still there is no certain evidence on the relationship between paroxetine and suicide. Totally, differentiating drug-induced suicide from disease-related, if is not impossible, seems difficult and needs further well-designed studies. Whatever the reason of suicide is (drug-induced or disease-related), management and prevention protocol is the same and physicians play the most critical role in this context. Prescribing antidepressants must be on a reasonable basis and when pharmacotherapy is not

necessary, physicians should manage pediatric patients with alternative treatments.

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