Letter to the Editor

Suicide attempt using zinc phosphide rodenticide: Ethical considerations for renal transplant programs

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Suicide has emerged as one of the leading causes of death worldwide [1]. According to the World Health Organization (WHO), the global annual mortality rate due to suicide was estimated to be 10.7 per 100,000 individuals [2]. The significant psychological impact of the disease process and haemodialysis on chronic kidney disease patients was already established by multiple studies in the past [3-4]. Moreover, CKD patients also experience significant issues in relationships, lifestyle, and employment, resulting in significant psychological distress [5]. Recent evidence also suggests that patients with CKD on haemodialysis had a statistically significant increased risk of suicide when compared to the general population, even after depressive disorders are controlled for [6]. Moreover, a high rate of co-morbid depression (20–25%) among patients with CKD on haemodialysis can also compound the risk of suicide significantly [7]. Old age, male gender, lower educational achievements, alcohol or other substance dependence, and recent history of psychiatric hospitalizations were shown to be independent predictors of suicide among patients with CKD on haemodialysis [6].

Although existing evidence suggests that many patients with CKD on haemodialysis may attempt suicide while waiting for renal transplantation, there is inadequate medical and psychiatric data to guide renal transplant (RT) programs in making decisions about transplantation for patients who survive serious suicidal attempts. Most of the RT programs include psychiatric consultation of potential renal transplant recipients to assess the patient's suitability for transplantation. Psychiatric assessment for suitability for transplantation will be influenced by various clinical and psychosocial factors, including the presence of psychiatric disorders, substance misuse, family support, and adherence to medications [8]. To the best of our knowledge, there is no specific ethical guideline to inform RT suitability among patients with a recent history of attempted suicide. There is a need for further clarity regarding the ethical principles that should govern transplant decisions among such patients. Here we discuss the ethical principles that RT programs should consider when making decisions about transplantation for patients with recent or multiple past histories of attempted suicide based on an actual case, we encountered in our RT program.

Case Report: A 39-year-old male with a known diagnosis of hypertension and CKD was evaluated at the nephrology department of our hospital for renal transplantation. He was undergoing haemodialysis at a local hospital near his home for the last year. His renal biopsy showed IgA nephropathy. After evaluation, he was listed as a potential candidate for living-related kidney donation as his sister was willing to be a kidney donor and investigations were supportive. However, two weeks before the date of transplant surgery, he was admitted to the nephrology department with an alleged intake of zinc phosphide rodenticide. A detailed psychiatric evaluation revealed that he had low mood, worries, reduced interest, and impaired biological function for over 2 weeks. Family conflicts with his sister precipitated the symptoms. To reduce the psychiatric symptoms, he resorted to alcohol, and a suicidal attempt was made when he was under the influence of alcohol. During this period, he also skipped medications and haemodialysis sessions.

His past psychiatric history also revealed history two suicidal attempts (intake of zinc phosphide and overdose of medications), and harmful use of alcohol and nicotine. The treating team also learned that the sister (donor) expressed some concerns and demanded more time to take the final decision regarding donating a kidney to him considering suicidal attempts. Considering the overall clinical picture the transplant team decided to defer RT based on the following issues.

1. He has a history of alcohol misuse in the past which he restarted recently
2. History of repeated suicidal attempts in the past and a recent suicidal attempt while waiting for RT
3. Recent onset of significant emotional symptoms requiring psychiatric assessment and management
4. Concerns of the donor in the context of suicidal attempt.

The psychiatric team diagnosed him with adjustment disorder and started him on oral sertraline 25 mg per day and oral melatonin 3 mg per day. It was decided to treat his psychiatric symptoms before listing again him for RT provided the donor is willing for surgery after explaining the potential poor prognosis following RT.

There are two major ethical problems in this case; Is it ethical to perform RT on a patient with a history of substance abuse and recurrent suicidal attempts? Is it ethical to take away a kidney from a healthy donor to perform RT on a patient with recurrent suicidal attempts?

Ethical decision-making of clinical issues is guided by careful analysis of the problem in the light of four ethical principles: beneficence, non-maleficence, justice, and autonomy [9]. However, in living-related kidney donation, one needs to consider the ethical problem from the perspective of the patient and the donor.

According to the principle of beneficence, physicians have a moral duty to act in the best interests of their patients. In the context of RT, physicians should actively promote RT in patients with CKD as transplantation can significantly improve patients' longevity and quality of life [10]. In this case, a duty of beneficence would compel the RT team to aggressively pursue RT for the patient irrespective of his history of substance misuse and suicide as it significantly improves the patient's life. However, physicians also have a duty of beneficence and non-maleficence towards the donor. Considering the patient's history of substance misuse, recurrent suicidal attempts, and emotional symptoms, the decision-making for RT, in this case, is not straightforward. Unlike other CKD patients, there may be higher risks of relapse of substance use leading to poor treatment adherence and treatment failures, and a potential risk of death by suicide, in this patient. The duty of beneficence and non-maleficence towards the donor demands the RT team to evaluate the prognosis with RT in this patient seriously. Previous studies have also shown that patients with co-morbid psychiatric illnesses may find regular follow-up difficult and may not be compliant with their post-transplant therapy [11]. Moreover, repeated suicidal attempts also indicate higher chances of suicidal attempts in the future as previous studies have shown that a previous episode of attempted suicide is the best and most important independent predictor of a future suicide attempt [12]. A recent study also showed an increased rate of death from suicide, but not non-fatal suicide attempts, among patients who received an organ transplant in the absence of past suicidal attempts, indicating high suicidal intent among persons who receive a transplant [13]. It is the moral duty of physicians to take a call regarding accepting an organ from a donor only after properly weighing the values and goals of the potential donor regarding organ transplantation [14]. If the clinical analysis shows that the chances of poor treatment adherence or suicidal attempts are high in the future, it may not be ethical to perform surgery on the donor as it violates the principles of beneficence and non-maleficence, especially when the potential outcome of the surgical process may not be in alignment with the goals of the donor.

Informed consent is an important ethical aspect of living related kidney donation. A properly performed informed consent incorporating information about potential risks and acknowledgment of uncertainty about outcomes when it exists is essential before RT [15]. However, in the context of living-related kidney donation where the recipient is very dear to the potential donor, the donors may base their decision primarily on care and concern rather than on a careful weighing of risks and benefits [16]. Physicians should be careful about this scenario and should inform in detail

about the proportionality of risks and benefits with donor surgery for the donor and the recipient. In this case, when informed about the potential poor outcome of RT due to poor drug adherence, psychiatric illness, or suicide, the donor demanded more time to take decisions for organ donation. The concept of autonomy is relevant in this case because without it living donation will not be ethically permissible [17].

Another important ethical aspect, in this case, is justice. Justice demands giving each person what is due and treating patients who have similar clinical scenarios in an equal fashion [10]. Our decision to defer RT in this patient cannot be considered as discriminatory as multiple factors indicated potential poor transplant outcome, such as substance misuse, poor adherence to treatment including haemodialysis, and multiple suicidal attempts. Any patient with similar clinical history who presents with a suicidal attempt will be treated similarly in our programs. However, the lack of long-term post-renal transplant prognostic data among patients with a history of suicidal attempts can be considered a limitation in our ethical analysis. If future studies suggest that the efficacy of providing RT to patients who have attempted suicide is like the efficacy of providing transplantation to other patients with chronic kidney disease, we may have to change our decision considering newer evidence.

In conclusion, the decision-making of the transplant team in consultation with the psychiatry department is ethical as it was taken after analysing clinical history, examination findings, and existing research evidence, and guided by ethical principles of beneficence, non-maleficence, autonomy, and justice.

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