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A commentary on "What can cause cancer patients to attempt suicide? Thiamine deficiency mimicking the symptoms of major depressive disorder"

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Letter to the Editor

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Dear Editor,

Suicide in people with cancer is often overlooked. Suicidal ideation is 10 times more prevalent in the cancer community – moreover, nearly one-fourth of people with cancer experience different levels of depression (Hosseini 2023). In the latest issue of *Palliative & Supportive Care*, Ishida et al. reported an interesting case of a patient with cancer who appeared to have a suicide attempt, probably as a result of thiamine deficiency-related depressive disorder (Ishida et al. 2024). We believe some clinical points might have been ignored in this case:

First, the patient's narration of what happened, mostly complies with a "non-suicidal self-injury" or "self-harm," rather than a suicidal attempt by definition (American Psychiatric Association 2013; Sarkhel et al. 2023), which questions the conclusion made by the authors.

Second, suppose the patient's act was a genuine and injurious attempt to end her life; we believe in this case the authors' approach the primary psychological management of the patient might have been incomplete and questionable, as several urgent measures, even hospitalization, should have been taken to prevent further self-harm (Sarkhel et al. 2023), considering that the single thiamine-based intervention was also conducted blindly.

Third, the reported thiamine deficiency in this patient might not be reliable. Thiamine typically binds to proteins in the bloodstream, mainly albumin, and hypoalbuminemia, as seen in the presented case, might contribute to bloodstream thiamine being underreported. This could significantly affect the laboratory results, since most laboratory techniques of thiamine detection are also based on detecting thiamine-carrier proteins (Edwards et al. 2017).

Fourth, although still indeterminate, studies have proposed an onset of action of hours, with a peak effect of 3–5 days and a half-life of over 2 weeks for thiamine (Martel et al. 2024). Thus, the resolution of symptoms in an hour might not be attributable to thiamine replacement. Moreover, studies have proven fluctuations in personal suicide ideations (Kleiman et al. 2017). Therefore, the patient's statement that "the feeling of wanting to die has disappeared" could not be conclusively credited to the thiamine-based intervention, but potentially a fluctuation in her ideation of suicide. The same applies to aripiprazole and mirtazapine as they also need at least 1 and 2 weeks to demonstrate their effects, respectively, which makes the resolution of symptoms in less than 24 hours of taking the medications unlikely as a result of medications.

It should be emphasized that the patient's long-term care is vital since recurrent and metastatic endometrial cancer is a serious condition requiring ongoing treatment and support. Although the latest studies have not acknowledged the impact of thiamine on depression, the potential role of thiamine deficiency in depression cannot be completely ruled out so far (Xu et al. 2024). While thiamine administration may have improved patient's symptoms, it is always essential to employ a comprehensive and evidence-based approach to suicidal patients, considering the integration of medical and psychological interventions to ensure maintaining the highest standards of care. Overall, we believe that the timely psychological intervention by the authors' team of experts has made substantial improvement in the patient's mental health status. However, whether thiamine administration could resolve suicide ideation in people with cancer should be studied further, and the reported approach should be clinically applied with caution.

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