

## ABSTRACT

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Glycemia and venous thromboembolism in patients with primary brain tumors - A speculative review.

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Venous thromboembolism (VTE) is a significant public health issue causing severe morbidity and mortality. One of the most vulnerable populations for VTE development are cancer patients. And among them, patients with brain tumors have arguably the highest risk of developing this often fatal complication.

Hyperglycemia is a well-known factor which leads to a wide variety of pro-thrombotic changes. In this article, we review the current literature on the topic of VTE in brain tumor patients. We also discuss the known correlation between VTE and glycemia, as well as the importance and frequency of glycemia dysregulation in brain tumor patients. Based on the already well-known importance of glucose metabolism in cancer patients, as well as the previous research of our group, we hypothesize that there is a significant number of brain tumor patients who have chronically elevated glycemia, a fact that so far hasn't been reported. We argue that these patients carry a significantly higher risk of VTE development and would benefit greatly from strict glycemic control. We present our hypothesis, the ways in which to test it, as well as the possible counter-arguments against it. Our hope is that other investigators will be inspired by our article to continue this type of research, since we consider the topic of VTE in brain tumor patients highly important and urgent, primarily due to its prevalence and severity.

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