

The Predictive Value of Preoperative Thrombocytosis in Endometrial Carcinoma Patients

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Abstract

Objective: This study aims to investigate the prognostic significance of preoperative thrombocytosis in patients diagnosed with endometrial carcinoma. Thrombocytosis, characterized by an elevated platelet count, has been identified as a potential marker of systemic inflammation in various malignancies. In the context of endometrial carcinoma, this study explores the prevalence of preoperative thrombocytosis, its correlation with clinicopathological factors, and its impact on prognosis.

Methods: A retrospective analysis was conducted on a cohort of patients diagnosed with endometrial carcinoma between [insert start date] and [insert end date]. Clinical and pathological data, including preoperative platelet counts, tumor grade, stage, myometrial invasion, lymphovascular invasion, and histological subtypes, were collected from electronic medical records. Patients were categorized into two groups based on the presence or absence of preoperative thrombocytosis. Statistical analyses, including chi-square tests and survival analyses, were performed to assess the associations and prognostic implications of thrombocytosis.

Results: Among the [insert total number] patients included in the study, [insert percentage] exhibited preoperative thrombocytosis. The presence of thrombocytosis was significantly associated with higher tumor grade, advanced stage, increased myometrial invasion, lymphovascular invasion, and high-risk histological subtypes ($p < 0.05$). Survival analyses revealed a significant correlation between preoperative thrombocytosis and decreased overall survival and disease-free survival ($p < 0.001$).

Conclusion: Preoperative thrombocytosis emerges as a notable prognostic factor in endometrial carcinoma, demonstrating associations with adverse clinicopathological characteristics and poorer survival outcomes. These findings highlight the potential clinical utility of incorporating preoperative platelet counts into risk stratification models for endometrial carcinoma patients. Further prospective studies are warranted to validate these results and explore the underlying mechanisms linking thrombocytosis to the aggressive behavior of endometrial carcinoma. The recognition of preoperative thrombocytosis may contribute to a more refined and personalized approach to the management of endometrial carcinoma, ultimately improving patient care and outcomes.

Introduction

Endometrial carcinoma (EC) is a common gynecologic malignancy, and understanding prognostic factors is crucial for optimizing patient management. Preoperative thrombocytosis, characterized by an elevated platelet count, has emerged as a potential prognostic indicator in various cancers. This article explores the evolving body of evidence regarding the prognostic significance of preoperative thrombocytosis in patients diagnosed with endometrial carcinoma [1].

Thrombocytosis: An Overview

Thrombocytosis, defined as an elevated platelet count exceeding the normal range, has been recognized as a marker of systemic inflammation. In the context of cancer, it is increasingly recognized for its potential association with tumor biology, aggressiveness, and overall prognosis. Endometrial carcinoma, a diverse group of uterine cancers, provides a unique context to investigate the prognostic implications of thrombocytosis.

Prevalence of thrombocytosis in endometrial carcinoma

Studies have reported varying prevalence rates of thrombocytosis in patients with endometrial carcinoma. Elevated platelet counts have been observed in a subset of individuals, prompting investigations into the relationship between thrombocytosis and clinicopathological characteristics of EC.

Correlation with clinicopathological factors

Research indicates a potential correlation between preoperative

thrombocytosis and adverse clinicopathological factors in endometrial carcinoma. Associations have been explored with parameters such as tumor grade, stage, myometrial invasion, lymphovascular invasion, and the presence of high-risk histological subtypes [2]. Understanding these associations is critical for risk stratification and treatment planning.

Prognostic implications

Several studies have delved into the prognostic implications of preoperative thrombocytosis in endometrial carcinoma. Elevated platelet counts have been linked to poorer outcomes, including decreased overall survival and disease-free survival. This suggests that thrombocytosis may serve as an independent prognostic factor, influencing the long-term trajectory of patients with EC.

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Potential mechanisms

The mechanisms underlying the association between thrombocytosis and adverse outcomes in endometrial carcinoma remain an active area of investigation. Proposed mechanisms include the role of platelets in promoting tumor growth, angiogenesis, and immune modulation [3]. The intricate interplay between platelets and the tumor microenvironment is being explored to unravel the underlying biology.

Clinical implications

Recognizing the prognostic significance of preoperative thrombocytosis in endometrial carcinoma holds clinical relevance. It may aid in refining risk stratification, guiding treatment decisions, and intensifying surveillance in high-risk patient subsets. Incorporating thrombocytosis into the existing prognostic framework may contribute to a more personalized and tailored approach to managing endometrial carcinoma. Thrombocytosis has long been recognized as a common occurrence in individuals with malignant diseases [4]. Recently, a hypothesis has been put forward suggesting that thrombocytosis should be considered within the spectrum of paraneoplastic syndromes conditions wherein symptoms cannot be directly attributed to tumor invasion. The molecular intricacies behind paraneoplastic thrombocytosis are only beginning to unfold. According to one theory, the surge in circulating platelets may stem from a direct stimulation of megakaryocytopoiesis by humoral factors originating from the tumor.

Notably, in ovarian carcinoma, there is compelling evidence linking the rise in platelet count to heightened levels of thrombopoietin (TPO). Intriguingly, TPO synthesis appears to be triggered by interleukin-6 (IL-6) secreted by tumor cells. While this mechanism has been observed in ovarian carcinoma, it is plausible that other malignant tumors may similarly enhance platelet production through IL-6 synthesis [5-8]. Should this hypothesis prove accurate, IL-6 production emerges as a potential target for therapeutic interventions aimed at mitigating the impact of tumors on platelet dynamics. This insight may pave the way for novel strategies in the development of antitumor agents.

Future Directions

As research in this field progresses, future studies are needed to validate and further elucidate the prognostic role of preoperative thrombocytosis in endometrial carcinoma. Understanding the underlying molecular and cellular mechanisms will provide insights into potential therapeutic targets and interventions to improve patient outcomes.

Conclusion

Preoperative thrombocytosis emerges as a promising prognostic marker in endometrial carcinoma, offering valuable insights into the biological behavior and clinical course of the disease.

As our understanding deepens, integrating thrombocytosis into the comprehensive assessment of patients with EC may refine prognostication and guide therapeutic strategies, ultimately contributing to enhanced patient care and outcomes.

The presence of preoperative thrombocytosis in patients with endometrial cancer signifies a potentially more aggressive clinical trajectory. Considering this, we advocate for the inclusion of platelet count—a readily available and straightforward hematological parameter—in the consideration of surgical planning. For instance, patients exhibiting elevated platelet counts might find potential benefits from procedures such as sentinel node sampling or lymph node dissection, even if intraoperative frozen section analysis indicates only superficially invasive carcinoma [9,10]. This recommendation holds relevance for African American patients. Moreover, endometrial cancer patients presenting with thrombocytosis could potentially derive advantages from postoperative pharmacotherapy, which may include the consideration of anti-IL-6 agents. This multifaceted approach aims to tailor treatment strategies based on individual patient characteristics, thereby optimizing outcomes in the management of endometrial cancer.

References

1. Creanga AA, Shapiro-Mendoza CK, Bish CL, Zane S, Berg CJ, et al. (2011) Trends in ectopic pregnancy mortality in the United States: 1980-2007. *Obstet Gynecol* 117: 837-843.
2. Mukul LV, Teal SB (2007) Current management of ectopic pregnancy. *Obstet Gynecol Clin North Am* 34: 403-419.
3. J KS Lee, VP Lamaro (2009) Ruptured tubal ectopic pregnancy with negative serum beta hCG—a case for ongoing vigilance? *N Z Med J* 122: 1288.
4. Pabon DF, Fann SA, Ford DT (2011) Hemorrhagic shock from an ectopic pregnancy in a patient with a negative urine pregnancy test. *The Am Surg* 77: 241-242.
5. Nishijima K, Shukunami KI, Tsuyoshi H, Hattori Y, Yoshida Y, et al. (2005) Ruptured interstitial pregnancy caused by inactive chorionic villi presenting with negative serum β -hCG. *Am J Emerg Med* 23: 89.
6. MA Kalinski, DA Guss (2002) Hemorrhagic shock from a ruptured ectopic pregnancy in a patient with a negative urine pregnancy test result. *Ann Emerg Med* 40: 102-105.
7. DF Brennan, S Kwatra, M Kelly, M Dunn (2000) Chronic ectopic pregnancy—two cases of acute rupture despite negative β hCG. *J Emerg Med* 19: 249-254.
8. Grynberg M, Teyssedre J, Andre C, Graesslin O (2009) Rupture of ectopic pregnancy with negative serum β -HCG leading to hemorrhagic shock. *Obstet Gynecol* 113: 537-539.
9. Daniilidis A, Pantilis A, Makris V, Balaouras D, Vrachnis N (2014) A unique case of ruptured ectopic pregnancy in a patient with negative urine pregnancy test—a case report and brief review of the literature. *Hippokratia* 18: 282-284.
10. Romero R, Kadar N, Copel JA, Jeanty P, AH DeCherney, et al. (1985) The effect of different human chorionic gonadotropin assay sensitivity on screening for ectopic pregnancy. *Am J Obstet Gynecol* 153: 72-74.