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Short Communication

Thromboembolic Event Revealing Neoplasia: Moroccan Experience

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Abstract

According to published research, there is a clear correlation between cancer and venous thromboembolism (VTE), with hidden cancer detected in 5–10% of VTE episodes. It's still debatable if a thorough neoplasia search is beneficial following a VTE episode. This study assessed the frequency of malignancies discovered following a VTE event and the efficiency of the various tests performed as part of the etiological evaluation.

Keywords: cancer; venous thromboembolism; etiological assessment

Introduction and objectives:

According to published research, there is a clear correlation between cancer and venous thromboembolism (VTE), with hidden cancer detected in 5–10% of VTE episodes. It's still debatable if a thorough neoplasia search is beneficial following a VTE episode. This study assessed the frequency of malignancies discovered following a VTE event and the efficiency of the various tests performed as part of the etiological evaluation.

Methodology:

In this observational analysis, which took place between June 2021 and January 2024, in the cardiology department of CHU Ibn Rochd, where we categorized 89 patients, hospitalized or seen in consultation for VTE, excluding those who were known to have cancer at the time of the diagnosis—whether it was active or in remission. During the etiological assessment, we conducted a number of examinations to ascertain their diagnostic efficiency.

Results:

6 cancers were discovered out of the 89 patients that were part of the trial; this indicates an incidence of 6.7%, which is in line with the incidences reported in the studies. Gastrointestinal, urogenital, and pulmonary cancers were representative of the main cancer groups. Concerning the most cost-effective examination, it was the thoraco-abdomino-pelvic scanner which allowed us to make the most diagnoses compared to chest X-ray, abdominal ultrasound and hemocultography.

Discussion:

The correlation between venous thromboembolism (VTE) and occult malignancy has long been a subject of interest in medical research. Our study's finding of a 6.7% incidence of cancer diagnoses following a VTE episode aligns well with previously reported ranges of 5–10%. This reinforces the established association between VTE and the presence of hidden malignancies, particularly gastrointestinal, urogenital, and pulmonary cancers, which are among the most frequently reported in this context.

One of the significant challenges remains determining the necessity and scope of cancer screening after a VTE event. Given that only a modest percentage of patients in our study were found to have malignancies, routine and extensive cancer screening may not always be justifiable, especially in resource-limited settings. This is consistent with recommendations from other studies that suggest selective screening based on clinical suspicion rather than routine exhaustive assessment.

In our study, the thoraco-abdomino-pelvic (TAP) CT scan emerged as the most cost-effective and diagnostically valuable tool, detecting the majority of malignancies compared to other modalities such as chest X-rays, abdominal ultrasound, and hemocultography. This supports previous findings that multi-detector CT scans offer superior diagnostic yield when it comes to detecting occult malignancies in patients with unprovoked VTE. However, despite its effectiveness, routine use of TAP scans for all VTE patients may not be warranted, particularly given the potential for overdiagnosis, unnecessary radiation exposure, and the financial burden it imposes on healthcare systems.

Current guidelines generally advocate for a more tailored approach, suggesting the use of extensive diagnostic procedures only when clinical or biological indicators, such as unexplained weight loss, abnormal laboratory results, or a patient's risk factors (age, smoking history, etc.), raise suspicion of an underlying malignancy. This approach balances the need for early cancer detection against the risks of overtreatment and overinvestigation, which can lead to patient anxiety and unnecessary medical costs.

Conclusion:

While there is a notable association between VTE and occult malignancy, as reflected in our findings, the incidence remains low enough to argue against a systematic and exhaustive cancer screening in all patients. However, the TAP scan proves to be the most reliable method for malignancy detection

when an etiological assessment is clinically warranted. Future studies could focus on refining risk stratification models to better identify patients who would benefit most from targeted cancer screening following a VTE event.

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