Risk of cancer in patients with inflammatory bowel disease and venous thromboembolism: a nationwide cohort study

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IIntroduction

Inflammatory bowel disease (IBD) is a well known risk factor for thromboembolic events. There is clear evidence in the literature indicating a significant correlation between coagulation and inflammation in Crohn's disease and ulcerative colitis, leading to an increased risk for venous thromboembolism (VTE) 1, 2.

The association between VTE and malignancy has also been recognized and is widely accepted for more than a century now. In recent years, there is increasing evidence that thromboembolic complications commonly occur before a cancer is diagnosed, and that primary VTE might be a useful marker of an occult tumor 3.

In contrast to primary VTE, the role of secondary VTE as a suitable tool to predict the onset of cancer is still unknown. It remains controversial whether thromboembolic complications occurring in patients with secondary VTE (i.e. in patients with known risk factors such as IBD) can also be used as a marker of an occult tumor. A better understanding of the correlation between IBD and VTE is required to clarify the usefulness of detecting hidden cancers in patients with IBD.

Key findings

Sørensen et al. performed a population-based nationwide cohort study, with the aim to examine the cancer risk after VTE in patients with IBD. The authors linked the Danish National Registry of Patients (DNRP) with the Danish Cancer Registry (DCR). This led to the inclusion of all patients' discharges from Danish non-psychiatric hospital departments since 1977, as well as all hospital outpatients and emergency room visits since 1995, which were associated with all incident cancers in Denmark since 1943. The enrolled patients with IBD were followed from their VTE diagnosis date until cancer diagnosis, death, or study end-date. For statistical analysis, a standardized incidence ratio (SIR) - the ratio of the observed number of cancers to the expected number of cancers - was used, to measure the association between VTE and cancer in patients with IBD. 95% confidence intervals (CIs) were calculated under the assumption that the observed number of cancers in a specific category followed a Poisson distribution.

Referring to their analysis, a total of 895 IBD patients with VTE were followed for a total of 5290 person-years. During the first year of follow-up, 28 patients were diagnosed with cancer, corresponding to a 1-year absolute risk of 3.1% and to a SIR of 3.2. In the second and in subsequent years, 61 cancers were diagnosed while 50.6 cancers were expected, corresponding to an overall SIR of 1.2.

The authors concluded that VTE in IBD patients is not only a consequence of the disease, but might also be a useful tool to detect occult cancer. They finally suggested that IBD patients with VTE should follow the same diagnostic guidelines as non-IBD patients suffering from primary VTE.

Conclusion

In summary, this study was the first trial to determine cancer risk in patients with IBD and VTE. Although the correlation between VTE and cancer is generally accepted, and IBD has also been shown to be a significant risk factor for thromboembolic events, the risk of a cancer in IBD patients subsequent to VTE detection is still unknown 1 - 3. The authors have finally demonstrated that the risk of malignancy in IBD patients with VTE is the same as in non-IBD patients with thromboembolic complications. Thus, IBD patients with VTE should undergo the same diagnostic procedures to detect hidden cancers as non-IBD patients suffering from primary thromboembolism.

Limitations of this study included the low number of cancer cases and the potential ‚misclassification' of VTE due to the diagnosis coding system used for the registry. The strength of the study involves its population-based design with complete follow-up available for all patients and a first useful step to correlate IBD, venous thromboembolism and cancer risk.

References

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