Study suggests that blood clots in abdominal vein could be an indicator of undiagnosed cancer

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New research published online today in *Blood*, the Journal of the American Society of Hematology (ASH), concludes that a blood clot in an abdominal vein may be an indicator of undiagnosed cancer. The study also suggests that these clots predict poorer survival in patients with liver and pancreatic cancer.

Compared to the general population, individuals who develop blood clots in their legs (deep-vein thrombosis, or DVT) or lungs (pulmonary embolism, or PE) are two to four times more likely to be diagnosed with cancer within the next year. In the presence of cancer, the blood can clot more easily. An expanding tumor may compress a vein in its path, reducing or minimizing blood flow. In other cases, surgery, inflammation, or tumor growth can injure blood vessels, promoting clotting.

While much is known about the association between DVT, PE, and subsequent cancer diagnoses, less is known about how clots in the veins that carry blood through the liver and other abdominal organs could serve as a marker for cancer. These clots, called splanchnic venous thrombosis (SVT), are rare and typically only form as the result of another complication.

To better understand whether SVT could indicate an undiagnosed cancer, researchers analyzed the medical discharge diagnoses of more than 1,000 Danish patients diagnosed with the abdominal clots from 1994-2011. Researchers followed the 1,191 patient records for a median of 1.6 years, calculating their risk of having a subsequent cancer diagnosis compared to the expected risk in the general population in Denmark. Researchers also assessed the survival outlook of patients with SVT as compared to cancer patients without blood clots.

"As we learn more about the association between many types of thromboses and cancer, we also want to better understand these more rare clots and how they can perhaps signal a hidden cancer," said lead study author Kirstine K. Søgaard, MD, of Aarhus University Hospital in Aarhus, Denmark. "In this case, we had access to comprehensive data that we believed could provide insights useful to clinicians caring for patients with this condition."

After linking the SVT patient records to the Danish Cancer Registry, the investigators observed that 183 of the 1,191 patients were later diagnosed with cancer, and more than half (n=95) of these cancers were identified within three months of SVT diagnosis. The majority of these cancers occurred in the liver, pancreas, or blood. After comparing cancer incidence among SVT patients with national Danish cancer rates, investigators estimated that patients with SVT were 33 times more likely to be diagnosed with cancer than expected during the first three months following SVT diagnosis.

Seeking to understand how SVT might affect survival in those patients with cancer, the research team compared survival in these patients with a matched cohort of cancer patients without the blood clots. While patients with liver or pancreatic cancer had a poor outcome regardless of SVT, patients with SVT and these cancers had markedly worse three-month survival outcomes than cancer patients without the clots (44% v. 55% for patients with liver cancer, and 33% v. 53% for patients with pancreatic cancer). While researchers did not observe a significant difference in survival between blood cancer patients with and without SVT, they noted a higher incidence of myeloproliferative neoplasms beyond 12 months following SVT diagnosis, potentially indicating delayed diagnosis.

"This study is the first to demonstrate in a large population that patients who develop splanchnic venous thrombosis are likely to be diagnosed with cancer within a relatively short time period," said Dr. Søgaard. "As we continue to learn more about patients who suffer from these blood clots, it will be important to examine the pros and cons of screening for these hidden cancers."

Source:
American Society of Hematology
