HEPATITIS C AND LYMPHOMA: A LESS NOTICED BUT IMPORTANT LINK

Dear Editor,

there is more and more proof that hepatitis C virus (HCV) infection is linked to lymphoproliferative disorders, especially non-Hodgkin's lymphoma (NHL) (1). While some studies have shown this link, it is not well understood in the therapy setting as a whole. This shows the need for more education and all-encompassing management plans.

About 71 million people around the world are infected with HCV, an illness known for its effects on the liver. But its effects outside of the liver, like mixed cryoglobulinemia and weakening of the immune system, may make lymphoid cancers more likely to form (2).

Researchers have found that people who have HCV have a much higher chance of getting B-cell lymphomas like marginal zone lymphoma, diffuse large B-cell lymphoma, and lymphoplasmacytic lymphoma compared to people who don't have HCV. The immune system stays active because of an HCV virus, which causes this to happen. This makes B cells multiply, which could lead to clonal spread and the growth of cancerous cells (3).

Finding HCV RNA in lymphoid organs also shows that the virus plays a direct role in cancer development. These results show that HCV is important as both a direct and an indirect cause of cancer (4,5). Antiviral treatment, especially using direct-acting antivirals (DAAs), has been shown to stop the spread of viruses and bring about remission in lymphomas that are linked to HCV (6). This makes it even more important for cancer patients to get an early diagnosis and complete treatment for HCV.

I believe that all people with lymphomas, especially those with B-cell subtypes, should be routinely screened for HCV to improve their health results. Antiviral medicine should be a part of the treatment plan for people with HCV-positive lymphoma. Longitudinal studies are being done to better understand the connections between HCV genotypes, treatment reactions, and lymphoma outcomes.

Recognising HCV as both an infection of the liver and a systemic disruptor that can cause cancer may improve care for patients and lower the public health cost of HCV and lymphoma.

I'm glad I had the chance to look into this important topic, and I hope it will lead to more talk and research in this area.

Sincerely,

ADELA PEROLLA

Hematologist
Service of Hematology

References

1. Couronné L, Bachy E, Roulland S, et al. From hepatitis C virus infection to B-cell lymphoma. *Ann Oncol*. 2018;29(1):92-100. doi:10.1093/annonc/mdx635

2. Suhail M, Sohrab SS, Kamal MA, Azhar EI. Role of hepatitis c virus in hepatocellular carcinoma and neurological disorders: an overview. *Front Oncol*. 2022;12:913231. Published 2022 Jul 29. doi:10.3389/fonc.2022.913231

3. Dai B, Chen AY, Corkum CP, et al. Hepatitis C virus upregulates B-cell receptor signaling: a novel mechanism for HCV-associated B-cell lymphoproliferative disorders. *Oncogene*. 2016;35(23):2979-2990. doi:10.1038/onc.2015.364

4. Vescovo T, Refolo G, Vitagliano G, Fimia GM, Piacentini M. Molecular mechanisms of hepatitis C virus-induced hepatocellular carcinoma. *Clin Microbiol Infect*. 2016;22(10):853-861. doi:10.1016/j.cmi.2016.07.019

5. Heredia-Torres TG, Rincón-Sánchez AR, Lozano-Sepúlveda SA, et al. Unraveling the Molecular Mechanisms Involved in HCV-Induced Carcinogenesis. *Viruses*. 2022;14(12):2762. Published 2022 Dec 11. doi:10.3390/v14122762

6. Salama II, Raslan HM, Abdel-Latif GA, et al. Impact of direct-acting antiviral regimens on hepatic and extrahepatic manifestations of hepatitis C virus infection. *World J Hepatol*. 2022;14(6):1053-1073. doi:10.4254/wjh.v14.i6.1053