

Positive association between hepatitis C virus infection and cancer would prove lethal to counter

Dear Editor,

Hepatitis C virus (HCV) infection is caused by HCV which is blood-borne pathogen.^[1] HCV is mainly transmitted through blood transfusion and contaminated needles used for medical therapy/intravenous drug use.^[2] It can also be transmitted through dialysis, renal transplant, and from mother to child during pregnancy.^[2,3] According to the Centers for Disease Control and Prevention, HCV-associated deaths are on rise in the United States of America – 19,659 deaths in 2014.^[4] 130–150 million people are infected with HCV worldwide.^[4] HCV is carcinogenic and is capable of inducing cancer. HCV also increases the mortality associated with cancer. Oral lichen planus, oral verrucous, and oral squamous cell carcinoma are observed to occur in HCV-infected patients.^[5] Further RNA of HCV has been found in oral lichen planus tissues.^[6] One study has observed that HCV infection increases the risk factor for the occurrence of oral cancer, and infected males have higher risk when compared to infected females.^[7] A recent study has observed that HCV virus infection is associated with nonoropharyngeal (except nasopharyngeal) and human papillomavirus-positive head and neck cancers.^[8] A case of multiple primary squamous cell carcinoma occurring in the tongue of a patient with recurrent HCV infection has been documented in literature.^[8] Dentists should be aware of HCV-related oral cancers and should take utmost care to screen these patients for possible cancerous lesions. If any lesion or growth in oral mucosa is detected on examination and observed to be persisting for >2 weeks, an incisional biopsy and subsequent microscopic analysis of the lesion should be undertaken.^[8] HCV increases the risk of occurrence of liver cancer and lymphoproliferative disorders.^[9] In addition, it has the capacity to cause cancers of pancreas, kidney, lung, and rectum.^[9] Chronic hepatitis C infection is strongly associated with hepatocellular carcinoma.^[10] It is observed that both cirrhosis and hepatocellular carcinoma can be prevented if HCV infection is treated before the development of cirrhosis.^[10] Thus, early detection of HCV infection is crucial. The association between HCV and non-Hodgkin lymphoma has been consistently established in the past two decades.^[11] Thus, it is important to prevent, control, and manage HCV infections. The combinations of sofosbuvir, ledipasvir, daclatasvir, ribavirin, and peginterferon-alfa for 8, 12, or 24 weeks are effective to manage HCV infections.^[12] The direct-acting antivirals are observed to be effective and well tolerated even in patients with advanced liver disease.^[13]

However, these drugs are expensive and high cost of these drugs are the major barrier to control HCV infections, especially in developing countries. The combination of HCV infection and cancer would be too lethal to counter. Hence, HCV infection should be tackled globally on priority and emergency basis.

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Conflicts of interest

There are no conflicts of interest.

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REFERENCES

1. Chan DP, Sun HY, Wong HT, Lee SS, Hung CC. Sexually acquired hepatitis C virus infection: A review. *Int J Infect Dis* 2016;49:47-58.
2. Mukhopadhyaya A. Hepatitis C in India. *J Biosci* 2008;33:465-73.
3. Tovo PA, Calitri C, Scolfaro C, Gabiano C, Garazzino S. Vertically acquired hepatitis C virus infection: Correlates of transmission and disease progression. *World J Gastroenterol* 2016;22:1382-92.
4. Hepatitis C: Global ambition, national realities. *Lancet* 2016;387:1970.
5. Gondivkar SM, Parikh RV, Gadbail AR, Solanke V, Chole R, Mankar M, *et al.* Involvement of viral factors with head and neck cancers. *Oral Oncol* 2012;48:195-9.
6. Nagao Y, Sata M, Noguchi S, Seno'o T, Kinoshita M, Kameyama T, *et al.* Detection of hepatitis C virus RNA in oral lichen planus and oral cancer tissues. *J Oral Pathol Med* 2000;29:259-66.
7. Mahale P, Sturgis EM, Tweardy DJ, Ariza-Heredia EJ, Torres HA. Association between hepatitis C virus and head and neck cancers. *J Natl Cancer Inst* 2016;108. pii: Djw035.
8. Stoopler ET, Sia YW, Chalian AA, O'Malley BW Jr., Alawi F. A rare presentation of multiple primary squamous cell carcinoma of the tongue in a patient with recurrent hepatitis C infection. *Spec Care Dentist* 2014;34:96-9.
9. Su FH, Chang SN, Chen PC, Sung FC, Huang SF, Chiou HY, *et al.* Positive association between hepatitis C infection and oral cavity cancer: A nationwide population-based cohort study in Taiwan. *PLoS One* 2012;7:e48109.
10. Parkash O, Hamid S. Next big threat for Pakistan hepatocellular carcinoma (HCC). *J Pak Med Assoc* 2016;66:735-9.
11. Taborelli M, Polesel J, Montella M, Libra M, Tedeschi R, Battiston M, *et al.* Hepatitis B and C viruses and risk of non-Hodgkin lymphoma: A case-control study in Italy. *Infect Agent Cancer* 2016;11:27.
12. Thompson AJ. Australian recommendations for the management of hepatitis C virus infection: A consensus statement. *Med J Aust* 2016;204:268-72.

Letter to Editor

13. Maan R, van der Meer AJ. Recent advances in managing chronic HCV infection: Focus on therapy in patients with severe liver disease. *F1000Res* 2016;5. pii: F1000 Rev-367.

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