Viral Hepatitis Burden Continues to Rise Globally

Increased levels of chronic hepatitis B and C appeared to propel this rise.

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Over a period of 27 years, deaths from viral hepatitis have significantly risen, report researchers in a study published in the Journal of Viral Hepatitis.

Viral hepatitis presents as liver inflammation caused by hepatitis viruses A, B, C, D and E. While all these viruses can cause acute hepatitis, hep B and hep C can also cause chronic infection, resulting in progressive liver fibrosis, cirrhosis and a higher likelihood of developing liver cancer. Hepatitis D occurs only in conjunction with hep B.

In 2017 (the latest year for which data are available), global deaths due to viral hepatitis increased to 1.41 million. This figure surpassed deaths from tuberculosis (1.18 million), HIV/AIDS (0.95 million) and malaria (0.62 million). Over time, this gap is expected to rise, with deaths from chronic hepatitis surpassing total deaths from HIV, tuberculosis and malaria in 2040. While remarkable progress has been made in tackling hep B, which can be prevented with a vaccine, and hep C, which can be cured with antivirals, the number of deaths has continued to increase.

“Knowing the contemporary disease burden of viral hepatitis and its temporal trends at the global, regional and national level are of importance to update the prevention strategies and reallocate the limited medical resources and are critical to successfully meet and ultimately exceed goals for global elimination of viral hepatitis,” study authors Zhenqiu Liu, of the Fudan University in Shanghai, and colleagues wrote.

The research team set out to examine the viral hepatitis disease burden at the global, regional and national levels. The researchers used data on the number of deaths, mortality rates, disability-adjusted life years (DALYs) and type of disease from the Global Health Data Exchange platform. DALYs are often used to gauge disease burden, with value placed on both premature death and suffering linked to poor health, thus indicating the loss in healthy years of life. The data covered both sexes, five age groups (those under 5, between 5 and 14, between 15 and 49, between 50 and 64 and those 65 and over) and eight liver-associated conditions (acute hepatitis A, B, C, E, liver cirrhosis, liver cancer and other chronic liver diseases linked to hep B and hep C).

The number of deaths from acute hep A worldwide fell almost 45%, from 33,600 in 1990 to 18,600

in 2017, with DALYs dropping 45%. In 2017, acute hep A accounted for 1.3% and 3.5% of total deaths and DALYs from viral hepatitis, respectively. These figures were higher in regions with sociodemographic indices in the low and low-middle range and lower in regions with high-middle and high indices.

Like hep A, the number of global deaths from acute hepatitis E fell some 12% during the same period, from 16,700 to 14,700. In 2017, hep E was responsible for 1.0% and 1.7% of total deaths and DALYs from viral hepatitis; these values were higher in areas with low socioeconomic indices.

From 1990 to 2017, the number of deaths from hep B rose from 580,500 to 799,000 worldwide. In 2017, 56.5% of total deaths from viral hepatitis and 58.6% of DALYs were attributable to hep B, with relatively higher proportions seen in regions with low-middle and low socioeconomic indices.

Globally, the number of deaths from hep C increased 65.7% from 350,100 in 1990 to 580,000 in 2017. During this time, hep C caused 41% of all deaths from viral hepatitis the world over. Unlike hep A, hep B and hep E, these numbers were higher in regions with high socioeconomic indices.

The researchers suggest that scarcity of data as well as estimates and extrapolations using mathematical models may limit their findings.

Overall, the number of deaths from viral hepatitis rose from 980,900 in 1990 to 1,412,300 thousand in 2017. Over the study period, the global total of viral hepatitis deaths from hep B and hep C together increased from 95% to 98%, causing 1.38 million deaths in 2017. During the same period, DALYs rose from 35.2 million to 43.1 million.

“In our study, we reported a continuously increasing trend of disease burden, represented by number of deaths and DALYs, of viral hepatitis over the past three decades,” wrote the authors. “The temporal trends in disease burden of viral hepatitis were varied across the world and among different type of diseases."

Click here to read the abstract in the Journal of Viral Hepatitis.
