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Hepatitis C co-infection increases risk of many AIDS-defining illnesses

Michael Carter, Tuesday, July 28, 2009

HIV-positive patients who are co-infected with hepatitis C virus are twice as likely to develop an AIDS-defining illness than individuals who are only infected with HIV, Italian investigators report in the August 15th edition of *Clinical Infectious Diseases*. Moreover, co-infected patients with cirrhosis had an even more marked increase in their risk of developing an AIDS-defining condition.

The author of an accompanying editorial described the research findings as “important”, adding that they “may affect the clinical management of hepatitis C virus-HIV coinfection.”

Liver disease, often due to hepatitis C, is now an important cause of illness and death in people with HIV. Hepatitis C infection has been independently associated with an increased risk of non-Hodgkin's lymphoma, which is an AIDS-defining illness. However, the association between the infection and the development of other AIDS-defining illnesses in co-infected patients has not been established.

Therefore Italian investigators from the ICONA Foundation Study Group designed a study involving 5397 HIV-positive patients, approximately half of whom were co-infected with hepatitis C. They compared the risk of developing AIDS-defining illnesses between these two groups. These illnesses were divided into broad categories: non-Hodgkin's lymphoma; viral (such as Kaposi's sarcoma); bacterial infections; HIV-related illnesses (for example, wasting); protozoal infections (like toxoplasmosis); and fungal infections (including pneumocystis).

A total of 25,000 person-years of follow-up were available for analysis. The co-infected patients took hepatitis C treatment for 1% of the follow-up period.

AIDS-defining rates were rare, with only 496 observed. Bacterial infections were the most common (five events per 1000 person years).

However, co-infected individuals had a significantly increased risk of developing an AIDS-defining condition compared to those only infected with HIV (adjusted relative rate [ARR] = 2.61; 95% CI, 1.88-3.61, $p < 0.001$).

Furthermore, co-infection was associated with a three- to five-fold increased risk in the development of bacterial, fungal, and protozoal infections. The investigators emphasise, however, that no significant relationship was found between co-infection and an increased risk of non-Hodgkin's lymphoma.

For all patients, a CD4 cell count below 200 cells/mm³ significantly increased the risk of all AIDS-defining conditions with the exception of non-Hodgkin's lymphoma and toxoplasmosis ($p < 0.01$). Each one log₁₀ increase in current viral load was associated with an approximately 50% increase in the risk of non-Hodgkin's lymphoma ($p = 0.03$).

The investigators also found that each 1 log₁₀ increase in current viral load increased the risk of developing a viral AIDS-defining condition ($p < 0.001$). Older age was associated with an increased risk of fungal infections such as pneumocystis ($p = 0.05$).

Next the investigators analysed the effect of antiretroviral treatment on the risk of the development of AIDS.

They found that patients only infected with HIV and who were taking antiretroviral therapy, were significantly less

likely to develop a fungal-related AIDS-defining illness than were co-infected patients taking HIV treatment ($p = 0.008$). By contrast, there was a greater risk of HIV-related diseases such as wasting for co-infected patients taking anti-HIV drugs, than co-infected patients who were naive to antiretrovirals (ARR = 10.26; 95% CI, 3.63-28.96).

Finally the investigators looked at the relationship between cirrhosis and the risk of AIDS-defining illnesses. This showed that co-infected patients who had progressed to this condition were significantly more likely to develop fungal diseases ($p = 0.003$), bacterial infections ($p = 0.009$), toxoplasmosis ($p = 0.01$), and HIV-related conditions ($p = 0.01$) than either co-infected patients who did not have this degree of liver damage or patients only infected with HIV.

“To our knowledge, this is the first study to investigate whether the risk associated with hepatitis C virus infection may be different according to specific AIDS-defining events and whether it is exacerbated in patients with liver cirrhosis”, write the investigators. They add, “our results have important implications because hepatitis C coinfection is frequent among HIV-infected individuals.”

The investigators suggest that the findings of their study should be taken into account by doctors treating co-infected patients, “in particular when deciding when to start antiretroviral therapy”.

This recommendation is endorsed by the editor of the accompanying editorial, who suggests the study “highlights and strengthens the need for careful follow-up of hepatitis C-HIV-coinfected patients, including preventative methods (screening, prophylaxis, and vaccination of preventable diseases), effective management of co-morbidities...and early and effective therapies against HIV and hepatitis C virus.”

Reference

Monteforte A d'A et al. *Risk of developing specific AIDS-defining illnesses in patients coinfecting with HIV and hepatitis C virus with and without liver cirrhosis*. Clin Infect Dis 49: 612-622, 2009.

Piroth L et al. *Coinfection with hepatitis C virus and HIV: more than double trouble*. Clin Infect Dis 49: 623-625, 2009.

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