Management of the HIV-HCV coinfected patient

Parenteral acquired infection by human immunodeficiency virus (HIV) is frequently associated with chronic hepatitis C virus (HCV) infection. Last year, the European Association for the Study of the Liver (EASL) released a consensus statement including guidelines for the management of HCV infection. Concerning the antiviral treatment of HCV in HIV coinfected patients, the guidelines suggested that treatment may be indicated in those patients in whom treatment has stabilised the HIV infection. Certainly, recent improvement in the antiviral treatment of each of these infections demands a reappraisal of the management of the HIV-HCV coinfected patient.

The study of Zylberberg and colleagues in this issue of Gut addresses one aspect of this problem—that is, the treatment of HCV during concurrent antiretroviral therapy (see page 694). The study cohort comprised 21 coinfected patients whose anti-HIV treatment included zidovudine, stavudine, and a protease inhibitor. HCV infection was treated with α interferon and ribavirin, a combination that has an established role for treatment of selected immunocompetent patients with HCV infection. The study concludes that combination therapy of HCV infection can be safely given to patients during concurrent anti-HIV treatment, and that treatment may achieve HCV viral clearance in a minority. Indeed, despite the inclusion of patients with pretreatment characteristics that predicted a poor response to combination treatment (all had failed previous interferon monotherapy, 12 with unfavourable HCV genotypes, and 12 had established cirrhosis), and despite the suboptimal duration of treatment for some (who may have benefited from 12 instead of six months of treatment), six patients were serum HCV RNA negative at the end of treatment which was sustained during follow up for three. Although the study lacked a control group, it seems likely that these results would be comparable with those achieved for immunocompetent HCV negative patients. Unfortunately, the impact of HCV genotype on treatment outcome was not described.

It has become evident that HIV infection may accelerate liver disease caused by chronic HCV infection. Published data show that liver fibrosis occurs at a faster rate in coinfected patients, and that a greater rate of decompensation and liver related death is observed in HIV-HCV coinfected than in HCV infected patients. The potential impact of HIV on HCV infection may have become more evident since the development of the highly active anti-HIV therapy, HAART. HAART has reduced the incidence of AIDS defining opportunistic infections, which in turn has been associated with a relative increase in the number of liver related hospital admissions for HIV infected patients. Indeed, the apparent convergence of HCV induced liver failure and progressive immune deficiency has led some to consider liver failure as an opportunistic disease. In addition to the adverse impact of HIV on chronic HCV infection, it has been suggested that concurrent HCV may adversely affect the natural history of HIV infection. Thus there is emerging a compelling argument in favour of treatment of HCV in coinfected patients.

Zylberberg and colleagues (and other emerging data) provide evidence of the safety of combination treatment given to patients with advanced HCV infection during concurrent anti-HIV treatment. Most of the cohort had detectable HIV at the time that interferon and ribavirin treatment was commenced. A rise in HIV titre was observed in three treated patients, although not clearly the consequence of anti-HCV treatment. Potential reasons for the observed rise in HIV titre include non-compliance with anti-HIV therapy and emerging HIV drug resistance, possibilities that were not excluded. The potential interaction of ribavirin with zidovudine and stavudine (competitive inhibition of phosphorylation reducing the effect of antiretroviral therapy) was not clearly evident in this study and has not been observed by others, but demands further examination. The use of interferon for treatment of HIV infected patients also appears safe. Indeed, interferon causes a significant reduction in HIV titre, has been evaluated as a component of anti-HIV regimens, and treatment may prolong survival of HIV infected patients. However, when given with nucleoside analogues, interferon may attenuate the CD4 lymphocyte response to effective inhibition of HIV replication. When used as monotherapy for HCV in coinfected patients, interferon treatment may be associated with a decline in CD4 lymphocyte count, but this is usually transient. In these studies, the effect of interferon on CD4 lymphocyte count had no apparent clinical consequences.

Concerns about the safety of combination interferon-ribavirin treatment of coinfected patients could be overcome by early and aggressive management of the HCV infection. Early treatment, before the need for anti-HIV treatment, would overcome the potential problem of drug interactions during treatment of HIV positive patients. It seems likely that patient tolerance and compliance with combination therapy may be better at this early stage. Also, biochemical liver dysfunction has been associated with the use of most anti-HIV drugs. This complicates the interpretation of liver dysfunction observed before and during combination antiviral treatment of HCV. Most importantly, it is evident that the response of HIV positive patients to treatment of HCV is dependent on immune status, as reflected by the CD4 lymphocyte count.

Thus interferon and ribavirin treatment of HCV in immunocompetent HIV positive patients is likely to be associated with good sustained response rates, and may achieve viral clearance in coinfected patients with more advanced HIV infection during HAART. Delayed treatment may permit the rapid development of liver fibrosis and cirrhosis, and compromise the chance of successful treatment. To suggest that treatment of HCV in HIV coinfected patients may be justified seems an understatement. Indeed, HIV coinfection may be an excellent indication for early aggressive treatment of chronic HCV infection.
The proportion of patients in Japan diagnosed with EGC is rising as a percentage of the gastric cancer load. This reflects the remarkable skill and considerable experience of Japanese endoscopists and also the investment that has been made in improving endoscopic technology. The proportion of EGC being detected at an even earlier stage is also rising with so-called “gastritis-like” cancer representing more than 50% of EGC in some units. This means that most cancers are identified before becoming ulcerated and implies that a greater proportion are at the intramucosal as opposed to the submucosal stage of development. These earlier cancers carry a better prognosis so it is possible that a higher proportion will take longer to progress and may be less clinically relevant in elderly patients.

What lessons can be drawn from this paper? Firstly, there can be no doubt that most early gastric cancers if not treated will eventually develop into advanced cancer and ultimately kill the patient. Secondly, a significant proportion of elderly patients with early gastric cancer will die of other diseases before their cancer becomes a clinical problem. From a practical clinical perspective it is important to identify those factors that cause EGC to progress from a mucosal lesion to a submucosal lesion, local invasion, and metastasis. This information may enable us to develop strategies to prevent what is, at present, considered an inevitable process.

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