Recombinant alpha interferon for chronic hepatitis B in anti-HIV positive patients receiving zidovudine

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Abstract

In this pilot study of the effects of interferon alfa in 10 anti-HIV positive, chronic hepatitis B patients treated with zidovudine (AZT), tolerance to interferon was good and similar to that in anti-HIV negative patients. After treatment, the HIV stage and CD4 lymphocyte count were unchanged. In two patients hepatitis B virus (HBV)-DNA and hepatitis B e antigen (HBeAg) disappeared and the serum alanine aminotransferase (ALT) returned to normal; loss of hepatitis B surface antigen (HBsAg) with absence of histopathological activity was observed after treatment in one of these patients. These preliminary results need to be confirmed by a larger study.

(*Gut* 1993; **supplement:** S106)

Interferon alfa treatment seems to be relatively ineffective in chronic hepatitis B patients who are positive for antibodies to HIV because of their compromised immune status. Treatment with zidovudine (AZT), however, improves immune function in these patients. The aim of this pilot study was to assess the tolerance and efficacy of alpha interferon in anti-HIV positive patients with chronic hepatitis B receiving AZT.

Patients and methods

Ten anti-HIV positive men (mean age 35 years, range 25–53) with chronic hepatitis B were included in the study. All were seropositive for hepatitis B surface antigen (HBsAg), e antigen (HBeAg), and hepatitis B virus (HBV)-DNA. Chronic hepatitis B was histologically proved in nine patients, including two with cirrhosis. The source of viral infection, liver lesion, and clinical stage of HIV infection are shown in Table I. The mean known duration of chronic hepatitis was three years (range one to seven).

All 10 patients had been receiving 600 or 1000 mg of AZT (Retrovir, Wellcome) daily for two to 22 months before starting interferon treatment. Recombinant interferon alfa-2b (INTRON A, Schering-Plough) was administered subcutaneously at a dose of 3 or 5 million units (MU) three times per week for four or six months, and all patients continued on AZT at a dose of 600 or 1000 mg daily. A liver biopsy was performed at the end of treatment in nine of the 10 patients.

TABLE I *Patient characteristics*

Risk factor/patient no	*Histological diagnosis*	*Clinical stage* of HIV infection*
Intravenous drug abuse		
1	Cirrhosis	III
2	Cirrhosis	III
Homo- or bisexual		
3	CAH	IVC2
4	CAH	II
5	CAH	IVC1
6	CAH	III
7	ND	II
Heterosexual		
8	CAH	II
9	CAH	II
10	CAH	IVC2

*Centers for Disease Control classification.
CAH: chronic active hepatitis; ND: not determined.

TABLE II *Response to treatment*

Patient no	*Before treatment CD4 count (/mm³)*	*After treatment CD4 count (/mm³)*	*AZT dosage/duration* (mg/mth)*	*Interferon dosage/duration (MU/mth)*	*Response*
1	858	615	600/2	5/4	No
2	805	486	600/7	3/6	No
3	265	365	600/2	3/4	No
4	269	288	1000/2	5/4	HBeAg-ve
5	20	ND	1000/17	5/6	No
6	684	965	600/2	3/4	No
7	289	144	1000/2	5/4	HBsAg-ve†
8	270	34	600/2	5/6	No
9	171	9	600/22	3/6	No
10	342	309	600/2	3/4	No

*Duration before interferon.
†Absence of histological activity on post-treatment liver biopsy.

Results

Tolerance to interferon was good and similar to that previously observed in anti-HIV negative patients. Response to treatment is shown in Table II. After interferon treatment, clinical HIV infection stage and mean CD4 lymphocyte count were unchanged. However, serum HBV-DNA and HBeAg disappeared and serum alanine aminotransferase activities returned to normal in two patients, one of whom also lost HBsAg. No histological activity was found in a liver biopsy specimen taken after treatment in the patient with HBs seroconversion.

Conclusions

In anti-HIV positive, AZT treated patients with chronic hepatitis B, recombinant interferon alfa treatment was well tolerated and seemed to be effective in some cases. These preliminary results need to be confirmed by a larger study.