Alpha interferon treatment of chronic hepatitis C in β-thalassaemia

V Di Marco, O Lo Iacono, M Capra, S Grutta, C Ciaccio, C Gerardi, A Maggio, D Renda, P Almasio, R Pisa, A Craxi

Clinica Medica R and Anat Patologica, Ospedale Cervello, Palermo, Sicily, Italy
V Di Marco
O Lo Iacono
P Almasio
R Pisa
A Craxi

Gruppo Cooperative Centri Microcitemia, Sicily, Italy
M Capra
S Grutta
C Ciaccio
C Gerardi
A Maggio
D Renda

Correspondence to:
Dr V Di Marco,
Clinica Medica R and Anat Patologica, Ospedale Cervello, Palermo, Italy.

Abstract

In this open, pilot study, interferon (IFN) alpha-2b seemed effective in the treatment of hepatitis C virus (HCV) infection in patients with β-thalassaemia. In seven of nine patients who completed the study alanine aminotransferase activities returned to normal, and a completely stable response 24 months after treatment was seen in five. Liver biopsy specimen showed a clear reduction in portal, periportal, and lobular necroinflammation in all five cases. Three patients stopped treatment early because of side effects.

(*Gut* 1993; **supplement:** S142–S143)

An open pilot study was carried out to assess the efficacy and safety of interferon (IFN) alfa-2b (INTRON A) in patients with β-thalassaemia and biopsy proved chronic liver disease related to hepatitis C virus (HCV) infection.

Patients and methods

The pretreatment characteristics of the 12 patients enrolled in the study are shown in the Table. All patients were treated with IFN alfa-2b intramuscularly at a dose of 5 million units (MU)/m^2 three times weekly for eight weeks followed by 3 MU/m^2 three times weekly for 18 weeks. A primary response was defined as a return to normal of serum alanine aminotransferase (ALT) activities, either during treatment or within two months of stopping, while a complete response was defined as maintenance of normal serum ALT activities for at least 24 months after treatment.

Results

Three of the 12 patients stopped treatment prematurely: one after eight weeks because of persisting fever, and two at seven weeks because of haemolytic anaemia. All side effects subsided promptly after stopping IFN.

Seven of the nine patients who completed the protocol had a primary response, including five in whom ALT returned to normal while on treatment and two within two months of stopping this. A completely stable response was achieved in five of the primary responders, while the other two relapsed on stopping treatment.

In none of the three patients who stopped IFN before completion or the two patients without a primary response did serum activities return to normal at any time during the 24 month follow up period (Fig 1).

A follow up liver biopsy, performed in the five complete responders 12 months after stopping IFN, showed a clear reduction in portal, periportal, and lobular necro-

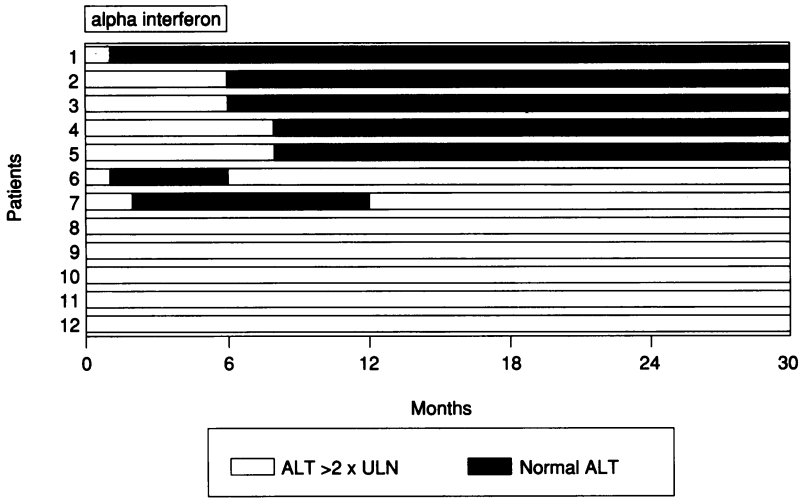

Figure 1: Serum alanine aminotransferase (ALT) during and after treatment.

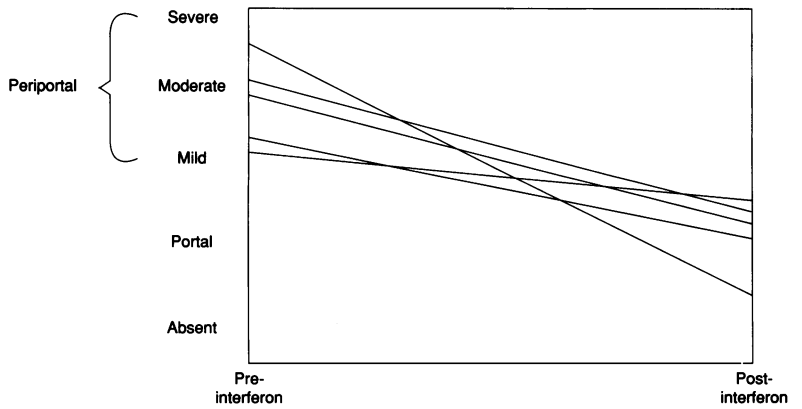

Figure 2: Histological necroinflammation.

TABLE *Patient characteristics*

Age (y)	12·6 (7-17)*
Male/female	7/5
Duration of raised serum ALT (mth)	56·6 (12-84)*
Anti-HCV (ELISA-2)+ve	12
HBsAg/IgM anti-HBc+ve	0
Anti-HIV+ve	0
Ferritin (ng/ml)	2490 (803-6957)*
ALT (normal value <40 IU/l)	294 (76-900)*
Liver biopsy:	
Mild chronic active hepatitis (CAH)	7
Moderate CAH	5 (3 with cirrhosis)
Mild siderosis	7
Moderate siderosis	2
Severe siderosis	3

*Mean (range)
ALT=alanine aminotransferase; HCV=hepatitis C virus; HBsAg=hepatitis B surface antigen; HBc=hepatitis B core.

inflammation in all cases (Fig 2). The degree of siderosis was essentially unchanged.

Conclusion

Although unusual side effects and delayed response might result in a different pattern of response to IFN in HCV infected patients with β-thalassaemia compared with that in non-thalassaemics, IFN seems effective in this context and deserves further investigation by a randomised, controlled trial.