

Autoimmune hepatitis (AIH) in HIV infection: An emerging cause of significant liver disease in patients on combination antiretroviral therapy (cART)?

Macdonald K¹, Childs K², Quaglia A², Agarwal K², Suddle A², Taylor C¹

1. Department of Sexual Health and HIV and 2. Institute of Liver Studies, King's College Hospital NHS Foundation Trust

Background: Autoimmune hepatitis (AIH) in HIV positive patients is uncommon and has been reported only in isolated case reports. AIH is characterised by hypergammaglobulinaemia, interface hepatitis and circulating auto-antibodies.¹ Diagnosis is based on a criteria developed by Alvarez which is a composite of laboratory tests, histology and history². Treatment aims are to obtain remission with corticosteroids and maintain remission with corticosteroid sparing immunosuppressants. We aim to describe the hepatological and HIV parameters in a case series of patients with HIV and autoimmune hepatitis presenting to a tertiary level specialist liver service.

Methods: This is a retrospective cohort study of patients with HIV referred to a tertiary level HIV/Liver service between 2009-15. Patients with a histological diagnosis of AIH were identified. Demographic, laboratory and histological data were collected. Patients were scored using modified Alvarez criteria, including histology reviewed by a single histopathologist. All continuous variables are presented as median (IQR).

Results:

479 patients were referred to the HIV/liver clinic, 81 did not have viral hepatitis. Of these, 6 cases of AIH were identified. Demographic, laboratory and histology data is outlined in table 1. All patients had an undetectable HIV RNA and were on cART containing tenofovir and efavirenz at referral. 3 patients were cirrhotic on biopsy.

Table 1	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5	Pt 6
Age	62	52	47	50	40	47
Ethnicity	White	White	Black	Black	Black	Black
HCV Ab	-	+ but SVR	-	-	-	-
EtOH	no	no	no	no	no	no
Auto-antibody	Anti SM 1:640	Anti-SM 1:180	Anti SM 1:80	ANA 1:320	ANA 1:40	NA not available
IgG	34.01	25	26.5	26.1	29.4	NA
Biopsy fibrosis score (Ishak)	5	5	2	5	1	2
Pre-IS Alvarez score	22	15	18	20	20	15
Post -IS Alvarez score	24	18	20	No treatment	22	17
Presenting AST	181	94	121	267	165	1181

Median pre-immunosuppressant (Pre-IS) Alvarez score was 19 (16, 20) where 10-15 denotes probable and 15 denotes definite AIH. Median post-immunosuppressant (post-IS) Alvarez score was 20 (18, 23) 12-17 denotes probable and >17 definite AIH.

Pre cART median AST was 34 IU/ml (30, 37), CD4 count was 194 cells/ml (154, 217) and median HIV viral load was 122000 copies/ml (84000, 256000). 1st abnormal AST was 92 IU/ml (76, 132) and occurred a median of 43 (8, 65) months post cART. At the time of abnormal AST, CD4 count was 628 cells/ml (595, 794) and HIV RNA <40.

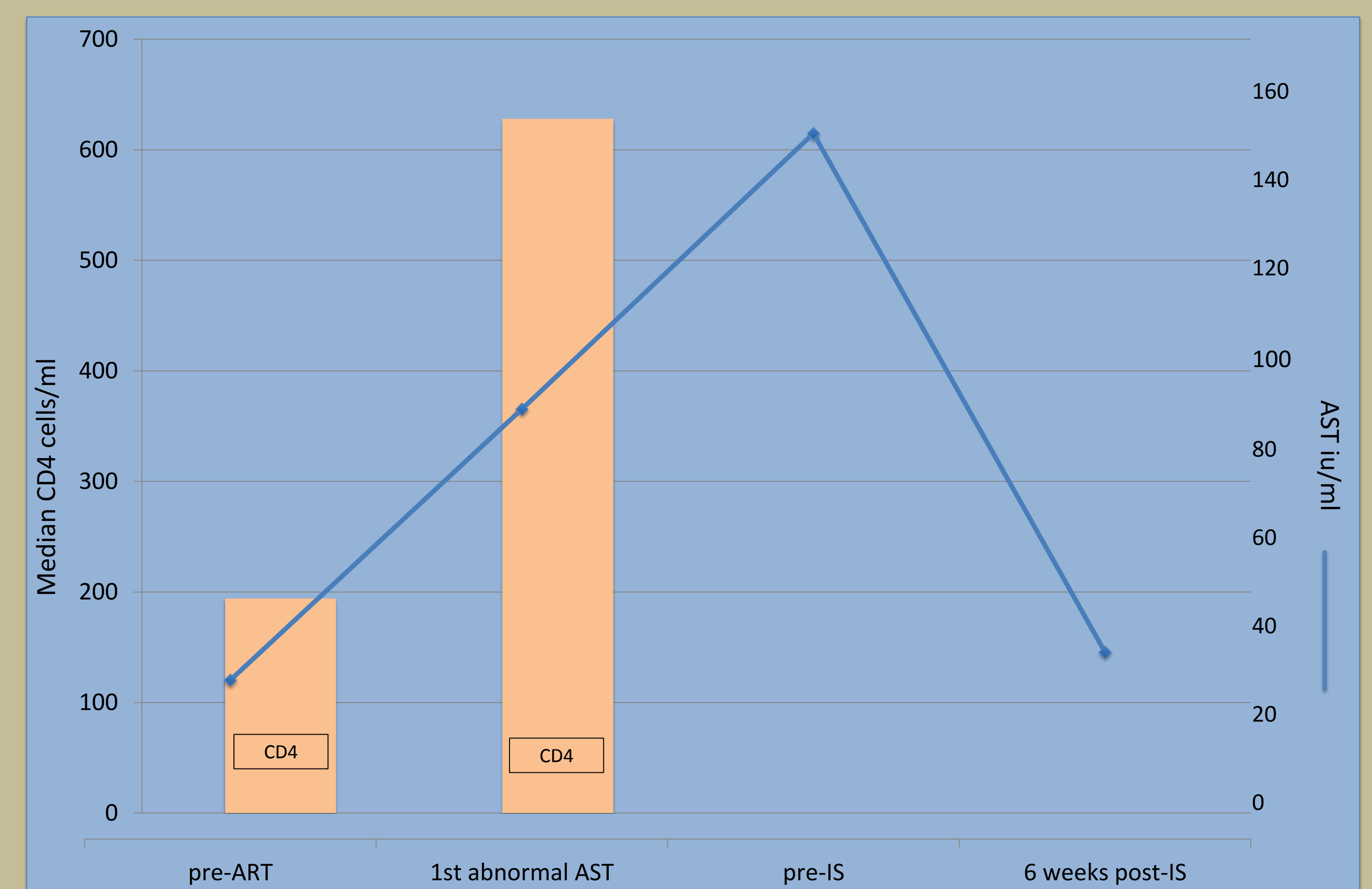


Figure 1: AST levels in patients with AIH before initiating ART and during the course of AIH

5/6 received immunosuppression with prednisolone, then azathioprine which maintained remission in 3 patients. 2 patients experienced toxicity with azathioprine; both then received alternative immunosuppression. 1 patient refused treatment. Currently the 5 treated patients have normal AST on immunosuppressant therapy.

Conclusions: We present the largest series of patients with AIH and HIV. In our experience AIH in the context of HIV is uncommon and seen exclusively in patients on cART. That AST levels in those diagnosed with AIH only became abnormal following the initiation of cART may suggest that immune reconstitution may have unmasked AIH in this predisposed group. Half of the patients were cirrhotic at their first fibrosis assessment which emphasizes the need for HIV physicians to refer promptly patients with transaminitis to hepatology services.