Outcomes of first raised ALT in HIV infections

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INTRODUCTION

Liver blood tests including alanine transaminase (ALT) are routinely monitored in patients living with HIV infection. They can be important in the diagnosis and monitoring of much liver pathology including viral hepatitis, drug hepatotoxicity, biliary pathology or non-alcoholic steatohepatitis. Abnormal results may cause alarm or necessitate recall/further investigation. Patients with low level abnormalities are often reassured that these are not significant and should settle.

Aim:
To describe the outcome of the first abnormal ALT result in otherwise well HIV+ patients.

METHODS

Between June 2009 and May 2011 we identified 955 HIV positive patients with a raised ALT ≥50U/L who were asymptomatic of any liver disease. Patients with ALT between 50-59U/L represented over 50% of these and were excluded, as were those without at least 1 subsequent ALT recorded. We undertook an analysis of the first consecutive 100 subjects. Laboratory results, drug history and clinical records were examined to determine the clinical significance of the rise. Demographic and HIV-related data were also collected.

RESULTS

86/100 were between 60-99U/L (within ACTG grade[1] I). Only 15 were > 99U/L (10 between 100–199 U/L; 3 between 200–399U/L and 2 ≥400U/L). 92/100 normalised by time of next test; 6 still raised at the time of audit. Of those that resolved, median time to next normal test was 4 months (IQR 2–5 months) and there were no further abnormal results within 12 months. Only 12 ultrasound scans and 1 hepatitis screen were done. From these, only 3 new diagnoses were subsequently established: 1 gallbladder polyp, 1 gallstones and 1 fatty liver. 7 had chronic viral hepatitis. In the remaining 90, the raised ALT normalised without a known cause.

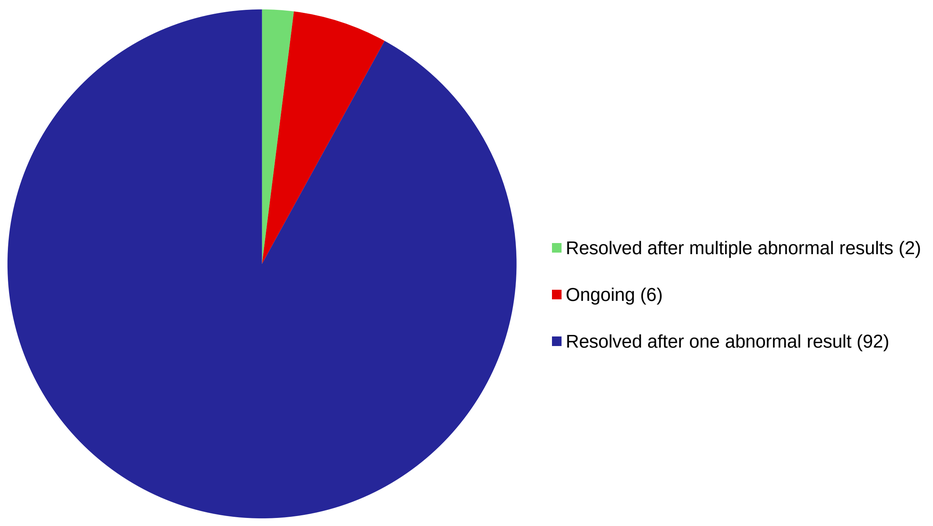

Fig 1. Pie Chart showing the outcome of an abnormal ALT result

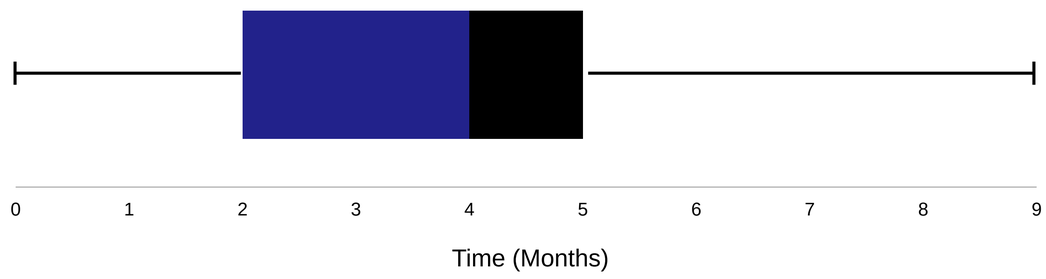

Fig. 2 Box and whisker plot showing median time, interquartile range and range to next normal test

CONCLUSION

The vast majority of abnormal ALTs had normalised by the time of subsequent testing. Only 3 resulted in a new diagnosis. Currently the American Gastroenterological Association[2] recommends simple, non-invasive serological tests as first-line investigations and only suggests more invasive tests or complex imaging as dictated by the clinical picture or if the rise is chronic (>6months).

In view of this and the results of this audit, it would be sensible to suggest that asymptomatic patients with a raised ALT of 60-99U/L continue to be reassured and ALT repeated at next visit to ensure normalisation. Hepatitis screening/imaging is only advisable if the subsequent ALT remains elevated.

Future work would aim to analyse the remaining patients in this cohort with particular interest in those with a small rise in ALT (50-59U/L) and those with a very high rise (>100U/L or ACTG grade 2 or greater).

Reference:

1. Adult AIDS Clinical Trial Group (AACTG). Table for Grading Severity of Adult Adverse Experiences. Division of AIDS, National Institute of Allergy and Infectious Diseases.

2. American Gastroenterological Association. American Gastroenterological Association Medical Position Statement: Evaluation of Liver Chemistry Tests. Gastroenterology 2002;123:1364-6.

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