

# Trends in liver function test (LFT) derangement in the HIV infected population – causes, consequences and considerations for future practice

A Gill, K Fernando, G Singh

Department of Sexual Health/HIV Medicine, Cobridge Community Health Centre, Stoke-on-Trent ST6 2JN, UK

## Background

Management of the HIV- infected cohort is becoming increasingly complex, with earlier commencement on antiretroviral treatment (ART) resulting in an ageing comorbid population. We aimed to evaluate specific causes of LFT derangement present in our cohort, and draw conclusions regarding the nature, progression and correlation of LFT derangement with HIV control.

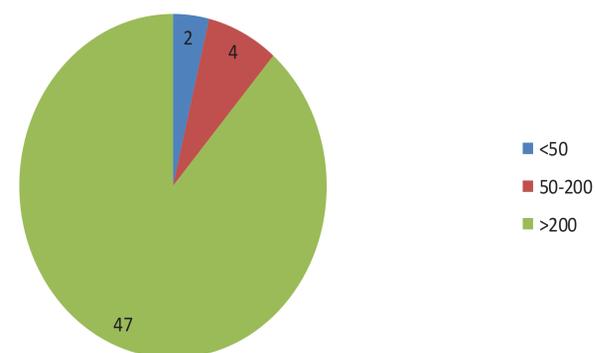
## Method

Retrospective case notes review of HIV patients attending follow-up between October and December 2017. 118 records were reviewed.

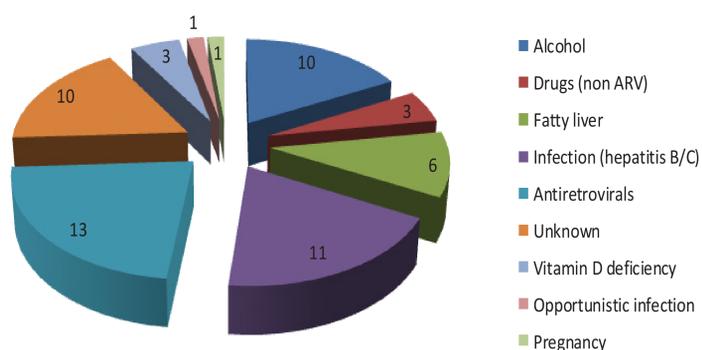
## Results

53 cases were identified. 35/53(66%) were male and 18/53 female. 22/53(41%) were aged 41-50 years, and overall 49/53(92%) were aged under 60. 47/53(89%) had a viral load of <50 copies/mL when their LFTs were abnormal. Similarly, 89% had a CD4 count > 200 cells/ul. The pattern of derangement varied between isolated hyperbilirubinaemia (8/53) all secondary to atazanavir use; obstructive pattern LFTs; and marked transaminitis. Hepatotoxicity was defined as an ALT five times the upper limit of normal, and this was noted in 6/53(11%) cases. Of these, 3/6(50%) were caused by acute hepatitis C infection, with other causes secondary to antiretrovirals (dolutegravir) and alcohol/fatty liver disease. In these cases, 4/6 (67%) had resolution of LFTs after a median of 2 months once the underlying cause had been treated, and were undetectable on ART.

CD4 count when LFTs deranged



Cause of LFT derangement



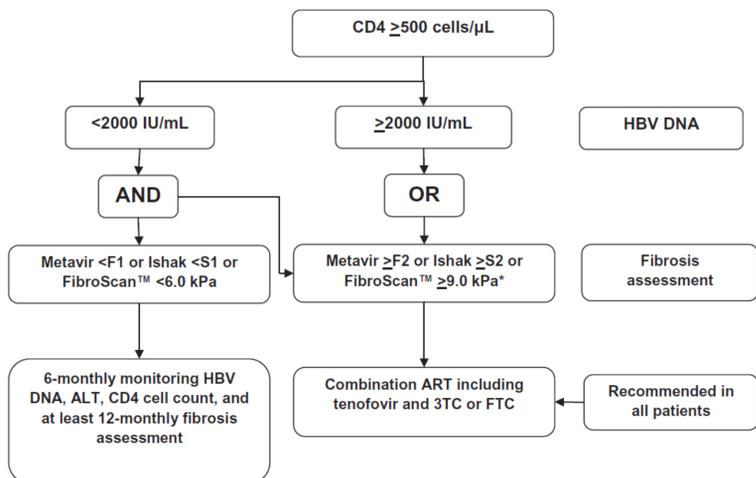
## Conclusion

Abnormal LFTs may affect up to half of attendees at HIV clinic. Whilst the rate of incident Hepatitis C infection remains high amongst HIV infected MSM, within our cohort the overwhelming majority of cases (87%) were due to non-infective causes. In an ageing HIV population it is likely this will be a continued trend. This reinforces the need for heightened awareness and monitoring of metabolic dysfunction. In this context, we also recognise the potential impact of polypharmacy and therefore need for a comprehensive drug history.

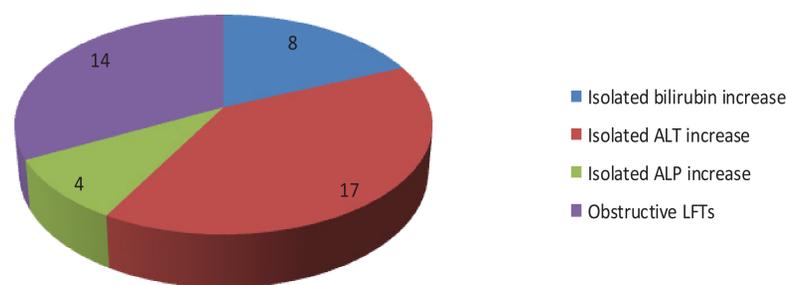
It is worth noting liver imaging was undertaken in all infective hepatitis cases, and was rarely carried out to investigate non-infective causes. Imaging seldom yielded a significant abnormality.

Alcohol excess and substance misuse contributed to 19% of cases and reiterates the need to address these issues as part of a holistic approach to patient care.

Algorithm 1



Pattern of LFT derangement



Of our reviewed cohort, 9 had hepatitis C co-infection. Only 3 had recorded evidence of elastography assessment. All results were within normal range with no evidence of fibrosis.

## References:

BHIVA guidelines for the management of hepatitis viruses in adults infected with HIV 2013 (algorithm 1)