significantly influence concentrations. Unfortunately, corresponding serum concentrations were not available. This would have been valuable. This is the first study correlating CSF cytokine responses to severity of tuberculous meningitis and comparing HIV positive with HIV negative groups. Further studies should be done to confirm these findings, perhaps to define their relevance to complications and to explore the possibility of IL 2 treatment in HIV positive patients.

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Hepatitis C testing in HIV infected patients

Numerous seroprevalence studies have shown a high rate of co-infection with hepatitis C among HIV-1 infected patients, ranging from 98% in haemophiliacs, 80% among injecting drug users, to 3–15% in homosexual/bisexual men.[1] Although it is estimated that there are 200 000–400 000 people infected with hepatitis C (HCV) in the United Kingdom,[2] the number of coinfected individuals is unknown. Data have shown that HIV increases the rate of HCV progression,[1] and there is also some evidence suggesting that HCV worsens HIV progression, although this is more controversial.[3]

There is a growing recognition of the significant impact of co-infection on the management of HIV disease. Hepatitis morbidity and mortality among coinfected patients has increased fivefold in recent years.[4] Furthermore the presence of HCV increases the frequency of hepatotoxicity with antiretroviral therapy, and may also impact on the choice of antiretroviral drug, with avoidance of drugs that are potentially hepatotoxic such as ritonavir and nevirapine.[4] Most importantly there is now effective treatment available for the management of HCV infection.[2] Recent preliminary data suggest in HIV-HCV co-infected patients superior virological response in those receiving PEG-interferon with ribavirin compared to standard interferon with ribavirin.[5] Finally, management of the HIV-HCV co-infected patients involves other interventions such as vaccination for other viral hepatitis A and B, and reducing alcohol intake.

These findings all highlight the importance of identifying those HIV infected patients who are co-infected with HCV. However, a recent survey at Kings' College Hospital in March 2002 revealed that only 63% of a cohort of 850 current HIV infected attendees had been tested for HCV. The majority of those not yet tested for HCV were patients who had presented before the routine introduction of HCV testing in 1999. Similar findings have been reported from other European centres. In a French cohort of 4017 HIV infected patients only 2589 (64%) were tested for HCV.[6] Although a substantial number of these patients have stored samples available on which retrospective HCV testing could be performed, the current guidance from Royal College of Physicians working group is that consent must be obtained before testing.[7]

Current guidelines from the United States now recommends HCV testing for all HIV infected patients.[8] Antibody based screening assays for HCV infection have evolved over the past decade and currently the most widely are third generation ELISA assays (Ortho).[2] Confirmation of positive results by recombinant immunoblot assays (Chiron RIBA, others) is still recommended as a proportion of positive tests may represent false positive results.[2] Qualitative and quantitative PCR (polymerase chain reaction) tests that detect the presence of HCV RNA and have sensitivity in the range of 50–1000 equivalents per ml are now also available.[2] We undertook a recent informal survey of 10 UK teaching hospitals, which showed differences in HCV testing policies. Seven clinical sites use serological testing for screening and confirm all initially positive results with a second serological assay, and then confirm positive results with a qualitative PCR test. Three sites use qualitative PCR testing for those with an initial positive serological test. For those with a negative PCR further confirmatory antibody assay are done at two sites and one site requests repeat PCR testing at 6 and 12 months.

What is the role of PCR testing in co-infection? At least 4–7% of HIV-HCV co-infected patients have no detectable antibodies in the presence of HCV viraemia[9] as they fail to produce antibodies or have low titres (can't be detected or give equivocal or indeterminate) or loss of detectable antibodies from serum despite persistent viraemia in immunosuppressed patients.[10] Therefore, additional testing with PCR is often indicated. The guidelines recommend[2] that all patients with positive HCV antibody tests and those patients thought to be at risk of HCV infection despite negative or indeterminate serological tests should undergo qualitative PCR testing of serum. A positive result confirms current viraemia whereas a negative test suggests non-viraemic infection. Patients with a a positive ELISA but negative PCR should be tested with recombinant immunoblot assay to confirm antibody status.

In conclusion, we recommend that centres caring for HIV infected patients should develop clear policies and strategies for ensuring all their new and existing HIV infected patients have undergone testing for HCV.

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First, do not harm: also an issue in NAA assay diagnostics for chlamydial infection

In his update on *Chlamydia trachomatis* diagnostics,[1] Chernesky emphasises that nucleic acid amplification (NAA) assays can be useful for screening purposes, because of their increased sensitivity and the possibility of non-invasive sample collection. Since the introduction of these assays, many screening interventions have been undertaken and evaluated mostly in an optimal research context. However, a number of problems can be expected if these diagnostics are implemented in large scale routine clinical practice or in community screening programmes.

Firstly, multiple testing sites may be needed for accurate results,[1] but cannot be realised for reasons of cost and inconvenience.

Secondly, the positive predictive value of a test is low in low prevalence populations. To avoid false positive diagnoses in these situations repeat testing of the sample, preferably by a different technique, is highly recommended. However, in clinical practice a single