

An Audit of Management of HIV in Pregnancy at an ISHS, Compared to BHIVA Guidelines for the Management of HIV in Pregnancy and Postpartum 2020

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Background and Aims

The British HIV Association (BHIVA) release guidelines on the best clinical practice for treatment and management of pregnant women with HIV. These guidelines were last published in 2018 with an interim update in 2020 [1].

We sought to assess the performance of this Integrated Sexual Health Services (ISHS) against national standards, to determine whether our clinical practice met the standards set out in the auditable outcomes included in BHIVA's guidance.

Methods

This audit used retrospective analysis of electronic patient records, via Millcare Systems, at an ISHS. Data was collected and analysed on excel, then compared to the guidance and auditable outcomes within the latest BHIVA Guidelines for the management of HIV in pregnancy and postpartum [1]. Patients were included if they had become pregnant and were known to have HIV, or if they were newly diagnosed with HIV in their pregnancy, from January 2009 to December 2019. We included all BHIVA auditable outcomes which were relevant to our clinical practice and were recorded in electronic patient notes. We excluded any auditable outcomes that had changed during the data collection period.

Results

Demographics

194 women and 285 pregnancies were included in this audit. The mean age of patients at conception was 31.3 (+/-5.54) years, with a range from 17 to 44 years old. The vast majority of patients were Black African (90.7%). Of the 285 pregnancies, 74.7% were new diagnoses of HIV, with 23.5% having a prior diagnosis, and 1.8% where time of diagnosis was not recorded. The average gestational age, at presentation to our service as pregnant, ranged from 3 to 34 weeks, with a mean of 14.2 (+/- 7.62) weeks. 135 of the patients had been pregnant, whilst diagnosed with HIV, prior to the current pregnancy, whereas 135 had not. Viral Load (VL) of 22.6% of patients were undetectable at conception and 91.5% at 36 weeks (See Table 1). There were no cases of mother to child transmission.

Table 1: Comparison of viral loads by gestation

Time of Sample collection	Number of Patients	Number Undetectable
Diagnosis as Pregnant	279 (97.9%)	63 (22.6%)
36 weeks	153 (53.7%)	140 (91.5%)

Monitoring

94.4% of patients had a documented CD4 result at conception, as is recommended in the BHIVA guidelines. The average CD4 count at conception was 434 cells/mm³ (SD 212.45) but this ranged from 20 cells/mm³ to 1350 cells/mm³. Of those who had a viral load performed around the time of conception, only 22.6% had a viral load less than 40, or undetectable, at this time (Table 1). At delivery, 45 pregnancies had a detectable viral load. The patients who had high viral loads at late gestations were either difficult to engage, non-compliant, Commercial Sex Workers, Intravenous Drug Users or patients who had transferred their care from other centres.

Other Infections

14 patients had Hepatitis C (HCV) coinfection and 23 had Hepatitis B (HBV) coinfection. 100% of the women living with HBV or HCV coinfection had LFTs within four weeks of starting ARVs, which is recommended by BHIVA. BHIVA also recommends that all women newly diagnosed with HIV during pregnancy should have a full STI screen performed. This was performed in 80.8% of pregnancies. (See Table 2)

Key Points and Recommendations

1. Routine offer of STI Screen at all appointments, if not undertaken recently.
2. Consideration should be given to increase initiating cART as per BHIVA guidelines
3. Continued close working within MDT to optimise patient care.
4. BHIVA could introduce a percentage standard for its auditable outcomes, for clinics to better assess their practice.
- 5 Further audit should be performed with a more recent cohort

Table 2: Auditable outcomes and percentage achieved

Outcome	Percentage (%)
1. Proportion having a sexual health screen	80.8
2. Proportion of newly diagnosed women, requiring combined Antiretroviral Therapy (cART) for their own health, starting treatment within 2 weeks of diagnosis	64.0
3. Proportion who commenced cART by beginning of week 24	73.2
4. Proportion with a baseline Viral Load (VL) $\geq 30,000$ copies/mL commencing cART at the beginning of the second trimester	22.2
5. Proportion with Hepatitis B/HIV co-infection who have Liver Function Tests (LFTs) performed 2 weeks after commencing cART	100.0
6. Proportion with Hepatitis C/HIV co-infection who have LFTs performed 2 weeks after commencing cART	100.0

Other BHIVA Recommendations

The 2018 guidelines recommend that partner testing should be completed for every woman newly diagnosed with HIV during pregnancy. Of the 135, for whom this was their first pregnancy with diagnosed HIV, 66.7% had the HIV status of their partner documented and 33.3% did not. In 31.6% of the pregnancies, patients had a partner who was HIV positive, 34.4% had a partner who was HIV negative, and in 16.1% cases the HIV status of the partner was not documented.

All patients were started on or already taking ART during their pregnancy. The average gestational age that ART was started, if a patient had not been on treatment prior to conception, was 22 weeks, ranging from 6 to 36 weeks.

BHIVA recommends that a resistance assay should be performed and documented, prior to initiation of treatment, except for women presenting after 28 weeks gestation. 71.1% of women who presented less than, or at, 28 weeks gestation had a resistance assay.

184 patients delivered via caesarean section, 67 had a normal vaginal delivery and 1 woman had an emergency caesarean section.

Discussion

It is clear to see that our ISHS performed well in certain outcomes; checking LFTs in those living with Hepatitis, and a lot worse in others; those with a high baseline VL being started on cART prior to second trimester. Many of our patients with VL $>30,000$ presented at or after the 16th week of pregnancy, which could be the cause for delay in starting treatment, or were difficult to engage with due to social factors. This audit is also covering a long time period, within which guidelines have changed. Uptake of Sexual Health screening amongst pregnant women in HIV could also be improved.

There is some limitation to our data collection, due to the separation of HIV and Obstetric care, both by location and electronic systems. It may be easier to highlight pregnant women, or be more opportunistic with their care at each antenatal contact, if there was a better combined MDT approach, although this has historically been difficult in HIV services. Our team holds a monthly Obstetric HIV MDT in order to maintain a high standard of care.

Our literature search did not reveal any similar local audits, but a UK national audit in 2017 [2], reported 79.1% of their similar cohort of patients started cART by week 24, compared to our 73.2%. Equally, in this national audit 46.5%, compared to our 36.2%, had a normal vaginal delivery, although this percentage could be affected by the proportion of patients who had an elective or planned C section.

BHIVA does not give a percentage standard for its auditable outcomes, this would aid evaluation of clinic performance. Further audit in different clinical settings may continue improving patient care. Good communication within the MDT and different trusts is paramount to delivering good quality HIV care.

References

1. BHIVA guidelines for the management of HIV in pregnancy and postpartum 2018 (2020 third interim update) Available from : <https://www.bhiva.org/file/5f1aab1ab9aba/BHIVA-Pregnancy-guidelines-2020-3rd-interim-update.pdf>
2. UK national clinical audit: management of pregnancies in women with HIV Available from: <https://bmjinfctdis.biomedcentral.com/articles/10.1186/s12879-017-2255-6>