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Trends in management and outcomes of pregnant women living with HIV in 2008-2019: a retrospective cohort study

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Objective

Despite major advances in the care of pregnant women living with HIV (WLHIV), they remain at increased risk of adverse perinatal outcomes. This study aims to assess recent developments in management and outcomes of pregnant WLHIV at a tertiary obstetric unit in the United Kingdom.

Methods

We conducted a retrospective cohort study of WLHIV delivering at the John Radcliffe Hospital, Oxford, during 2008-2019. Detailed data was collected for maternal, virological, obstetric and perinatal characteristics. To determine changes over time, data from the periods 2008-13 and 2014-19 were compared.

Results

We identified 116 pregnancies in 94 WLHIV. Between 2008-2013 and 2014-2019, the rate of preconception HIV diagnosis increased from 73% to 90% (p=0.021) and the proportion of WLHIV on combination ART (cART) at conception increased from 54% to 84% (p=0.001). The median gestation at which cART was initiated antenatally decreased from 22^{+1} to 17^{+1} weeks (p=0.003). In 2014-2019, 41% of WLHIV received non-nucleoside reverse transcriptase inhibitor-based cART, 37% protease inhibitor-based cART, and 22% of cART regimens contained an integrase inhibitor. The proportion of WLHIV with a viral load <50 copies/mL at delivery rose from 87% to 94% (p=0.235). 66% of WLHIV delivered by Caesarean section, with a significant decrease over time in the rate of both planned (62% to 39%, p=0.016) and actual (49% to 31%, p=0.044) elective Caesarean. Perinatal outcomes included one case of perinatal HIV transmission (0.86%), 11% preterm birth, 15% small-for-gestational-age, and 2% stillbirth. There was an association between a viral load >50 copies/mL at delivery and preterm delivery (p=0.0004).

Conclusion

Virological, obstetric and perinatal outcomes of WLHIV improved during the study period. Further improvements are anticipated with the increased use of integrase inhibitor-based cART.