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DOES ZIDOVUDINE MONOTHERAPY (MZDV) IN PREGNANCY PREDISPOSE TO THE EMERGENCE OF RESISTANCE?

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AIMS: BHIVA guidelines recommend antenatal mZDV as an option in certain scenarios in pregnancy [baseline viral load (BVL) <20000 copies/ml, 2001 guidelines; <10000 copies/ml 2005 guidelines]. Concerns for evolution of resistance prompted this study to determine the incidence of resistance following mZDV exposure.

METHODS: Retrospective review of women receiving mZDV in pregnancy with a BVL of <20000 copies/ml in four hospitals. Demographic and clinical parameters were collected. Genotyping of samples nearest delivery was performed using population-based sequencing (Trugene HIV-1, Bayer and ViroSeq v2.6 Celera/ ABi). A subgroup of samples was also examined for drug-resistant minority species using cloning technology (Zero Blunt TOPO, Invitrogen).

RESULTS: Fifty-six women had samples available for analysis; 17 had <50 copies/ ml off therapy and could not be genotyped; eight failed to amplify and 48 were sequenced successfully. Of these 48 women, median age was 30 years (19–40); 36 (75%) were Black Africans; 44 (92%) infected with non-B subtypes. Median pre-treatment HIV viral load (VL) and CD4 counts were 2101 copies/ml (285–14900) and 410 × 10^6/l (228–958) respectively. Median delivery VL was 1664 copies/ml (78–27930) and median duration of mZDV exposure was 11 weeks (3–21). No ZDV-associated mutations were detected by population- based sequencing (*n*=48) and no drug-resistant minority species were detected by cloning (*n*=13). There were no vertical transmissions in the cohort (*n*=73).

CONCLUSIONS: Results to date from this cohort support the strategy of selective mZDV in preventing MTCT of HIV-1 without the development of significant resistance.

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