Background and Objectives

TB predominantly affects women of reproductive age and pregnant women are at elevated risk of progression from latent to active TB.

WHO guidelines recommend >6 months of isoniazid (INH) preventive therapy for people living with HIV from low and middle income countries where TB is endemic, including pregnant women.

Very scarce data is available on INH PK during pregnancy.

Methods

Prospective cohort of pregnant, HIV+ women at 14 to 34 weeks of gestation and on starting ART.

PK sampling at ≥2 weeks after recruitment and during pregnancy, and then at around 12-21 weeks after delivery.

Results - Study population

32 and 815 women were intensively and sparsely sampled, respectively. 88% of the women were concomitantly receiving efavirenz-based HAART. Summary of characteristics in Table 1.

Results – PK model

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Pregnant (n=20)</th>
<th>Nonpregnant (n=637)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, median (range)</td>
<td>29 (18-45)</td>
<td>29 (18-45)</td>
</tr>
<tr>
<td>Weight in Kg, median (range)</td>
<td>68 (42-164)</td>
<td>61 (38-118)</td>
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<tr>
<td>Fat-Free Mass in kg, median (range)</td>
<td>40 (25-65)</td>
<td>36 (25-55)</td>
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<tr>
<td>Gestation/postnatal age in weeks, median (range)</td>
<td>26 (14-34)</td>
<td>16 (7-23)</td>
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</table>

Table 1: Patient’s characteristics

Conclusion

Overall, the clearance of isoniazid in all the three NAT2 acetylator groups was higher compared to historical nonpregnant ranges, irrespective of pregnancy.

The consequences of this reduction in exposure on the safety and effectiveness of isoniazid preventive therapy will be further investigated.

References


Discussion

Isoniazid exposure was decreased during pregnancy, due to increased clearance.

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