Raltegravir plasma concentrations on HIV-1 infected pregnant women

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INTRODUCTION
In France, around 1 500 HIV-infected women give birth each year. With the combination antiretroviral (ARV) therapy, the rate of mother-to-child transmission (MTC) of HIV-1 is reduced from 25-30% to 0.5%.

OBJECTIVES
- Prevention of mother-to-child transmission (MTCMT) to decrease and to maintain plasma viral load (pVL) < 400 copies/mL during all pregnancy until the delivery
- To treat maternal HIV infection
- To limit emergence of HIV-resistance in mother

METHODS
- Single center, observational, retrospective study
- Inclusion criteria:
  - HIV-1 pregnant women receiving RAL 400 mg BID containing regimen
  - Initiation of RAL at least 2 weeks before delivery
- Exclusion criteria:
  - Maternal data available: demographics, immunovirological and therapeutic

RESULTS

1: Patient characteristics (n = 23)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>31 (27-38)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>21 (91%)</td>
</tr>
<tr>
<td>濄surname:</td>
<td>3 (123)</td>
</tr>
</tbody>
</table>

2: Historic and ongoing ARV therapy (n = 23)

<table>
<thead>
<tr>
<th>ARV Regimen</th>
<th>Median Duration (months)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAL + TDF</td>
<td>8.1 (2.6 - 67.1)</td>
<td>8</td>
</tr>
<tr>
<td>RAL + TDF + FTC</td>
<td>8.3 (4.0 - 12.1)</td>
<td>3</td>
</tr>
</tbody>
</table>

3: Median RAL maternal plasma C12h

<table>
<thead>
<tr>
<th>Time (h)</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tpeak</td>
<td>3 (2 - 4)</td>
</tr>
<tr>
<td>Tnull</td>
<td>1 (0 - 2)</td>
</tr>
</tbody>
</table>

4: Other Median ARV plasma concentrations

<table>
<thead>
<tr>
<th>ARV Regimen</th>
<th>Median Concentration (ng/mL)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAL + TDF</td>
<td>90 (35 - 490)</td>
<td>12</td>
</tr>
<tr>
<td>RAL + TDF + FTC</td>
<td>91 (35 - 490)</td>
<td>12</td>
</tr>
<tr>
<td>RAL + TDF + FTC + 3TC</td>
<td>91 (35 - 490)</td>
<td>12</td>
</tr>
</tbody>
</table>

REFERENCE
1. Poster 891 22nd Conference on Retroviruses and Opportunistic Infections 23-26 February, 2015, Seattle, WA, USA.

SUMMARY
Despite a large inter-patient variability, RAL plasma concentrations were not significantly modified during pregnancy and are similar to historical data in non pregnant population. 400mg BID seems to be a appropriate daily dosage in pregnant women.

All pregnant women except one late presenter (pVL = 500 copies/mL) reached pVL < 400 copies/mL and 74% < 50 copies/mL at delivery.

RAL containing regimen seems to be effective and safe for mothers and children.

Postnatal transfer (RALT = 1.0) and accumulation in Amniotic fluid (RALT = 1.05) because of an inactivity of fetal UGT1A1.

REFERENCES