HIV-infected children in the context of the Niger Initiative on Antiretroviral Access (INAARV), Niger (West Africa)

R.Abdoulaye-Mamadou1, J.Ledellé2, Y.Made3, C.Déry3, W.Alloumoué4, M.Mahamane4, J.Dossoué4, M.Amoudou4, D.Gremennoué5, C.Peyre6, S.Mamadou7, C.Kerlam8 and the National Technical Pediatric Committee

1 Niamey National Hospital - Niamey, Niger; 2 SOLTHIS NGO, Pitié-Salpêtrière Hospital - Paris, France; 3 La Primatrice Regional Hospital - Niamey, Niger; 4 Institut Pasteur- Paris, France; 5 Maraka District Hospital - Maraka, Niger; 6 Zinder National Hospital - Zinder, Niger; 7 National HIV/AIDS Reference Laboratory, La Primatrice Regional Hospital - Niamey, Niger

Background

**Pediatric HIV/AIDS estimates in Niger**
- Children <15yrs living with HIV/AIDS (UNAIDS 2008): 8,900
- Children <15yrs in need of ART (WHO/UNAIDS/UNICEF 2007): 3,600

Free care and ARV treatment for HIV-positive children is available since 2004, thanks to INNARV and technical support provided by the NGO Solthis.

We report here an evaluation of the national pediatric cohort in its entirety.

Methods

Cohort study of all children with confirmed HIV infection and those with presumptive severe HIV disease followed up in all HIV centers in Niger.

**Inclusion criteria:**
- HIV infected children: PCR+ at any age or serology+ and age >18 months
- Children with severe HIV disease (presumptive diagnosis): HIV antibody+ at any age (or HIV antibody+ mother) and WHO stage III or IV and/or advanced or severe immunodeficiency

Results

Whole national pediatric cohort: 565 children

**Severe HIV (presumptive diagnosis):**
- HIV-: 31
- HIV+ confirmed:
  - Severe: 133
  - HIV exposed and symptomatic: 59

Children included in the study: 192

Study period: November 2004 – May 2008

**Characteristics at inclusion**

**Enrollment**
- Clinical symptoms: 143 (75%)
- Malnutrition programs: 26 (14%)
- PMTCT post-natal follow-up: 22 (11%)

**HIV-associated immunodeficiency at inclusion (WHO classification)**

<table>
<thead>
<tr>
<th>Not significant</th>
<th>&lt;1 year</th>
<th>1 – 3 yrs</th>
<th>3 – 5 yrs</th>
<th>&gt; 5 yrs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CD4 &gt;15%)</td>
<td>1 (6%)</td>
<td>2 (6%)</td>
<td>4 (7%)</td>
<td>0 (0%)</td>
<td>6 (9%)</td>
</tr>
<tr>
<td>(CD4 10-15%)</td>
<td>0</td>
<td>1 (3%)</td>
<td>1 (3%)</td>
<td>0 (0%)</td>
<td>2 (3%)</td>
</tr>
<tr>
<td>(CD4 5-10%)</td>
<td>1 (6%)</td>
<td>4 (14%)</td>
<td>6 (15%)</td>
<td>0 (0%)</td>
<td>11 (15%)</td>
</tr>
<tr>
<td>(CD4 &lt;5%)</td>
<td>10 (25%)</td>
<td>31 (50%)</td>
<td>13 (25%)</td>
<td>2 (4%)</td>
<td>56 (73%)</td>
</tr>
</tbody>
</table>

**Total** 108

Follow up

**Patients on ART (n=108)**
- Median follow-up: 9 months [IQR:1-17]
- Lost to follow-up: 44 (41%)
- Deaths: 8 (7%)
- Still followed: 56 (52%)

**Patients without ART (n=83)**
- Median follow-up: 2 months [IQR:0-8]
- Lost to follow-up: 48 (58%)
- Deaths: 10 (12%)
- Still followed: 25 (30%)

**Antiretroviral treatment**

**1st line**
- 2NRTI + 1NRTI
  - D4T/3TC/NVP: 67% (31/46)
  - D4T/3TC/EFV: 72% (6/8)
  - AZT/3TC/NVP: 40/40
  - AZT/3TC/EFV: 1

**2NRTI + IP**
- D4T/3TC/ NFV: 29% (26/90)
- AZT/3TC/ NFV: 5
- AZT/3TC/LPV/r: 2
  - ABC/D4T/LPV/r: 1
- N.A.: 4%

**TOTAL:** 108

**25% of patients are on 2nd line ART**

**Z-score progression on ART**

**Follow up**

**Conclusions**

Most children enrolled in the pediatric cohort are symptomatic, identified at a late phase of HIV infection.

Active and early screening in high risk groups (i.e. malnourished children) and an improvement of infant PMTCT follow-up is crucial to the successful implementation of pediatric care.