SWITCH CASES,
FROM BAYLOR-UGANDA

Dr. Sabrina Bakeera-Kitaka
Baylor-Uganda Vision and Mission

**Vision**: A healthy and fulfilled life for every HIV infected and affected child & their family in Africa

**Mission**: To provide high-quality family-centered paediatric and adolescent health care, education and clinical research world wide.
CASE 1

• Acknowledgement:
  - Dr. Kyazze Solomon
  - Counsellor Jane

• Date: 05/08/14
Case 1

• Name: N.C, ID No: PIDC19851; Age: 15yrs

• Sex: Female

• Occupation: Student in Standard S. School.

• Primary Caretaker: Father.
PAST MEDICAL AND HAART

• Enrolled on 10/10/11; Stage 1, Asymptomatic. CD4-133 cells

• ARV initiation on 31/10/11 (AZT/3TC/NVP)

• 10/07/12: progressed to stage 2, Recurrent genital herpes

• 04/12/12: Stage 3 with PTB, Sputum +ve, NVP substituted with EFV
# Laboratory results

<table>
<thead>
<tr>
<th>Date</th>
<th>CD4 Abs</th>
<th>CD4 %</th>
<th>Viral load</th>
<th>ART REGIMEN/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/10/11</td>
<td>133</td>
<td>6</td>
<td></td>
<td>AZT/3TC/NVP</td>
</tr>
<tr>
<td>08/05/12</td>
<td>171</td>
<td>18</td>
<td></td>
<td>AZT/3TC/NVP</td>
</tr>
<tr>
<td>30/10/12</td>
<td>158</td>
<td>14</td>
<td></td>
<td>AZT/3TC/NVP( Immuno discordance suspected)</td>
</tr>
<tr>
<td>27/11/12</td>
<td></td>
<td></td>
<td></td>
<td>ZN stain; +++ AFB’s. NVP substituted with EFV</td>
</tr>
<tr>
<td>10/12/12</td>
<td></td>
<td></td>
<td>&lt; 20 cp/ml</td>
<td></td>
</tr>
<tr>
<td>15/04/13</td>
<td>157</td>
<td>12</td>
<td></td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>08/07/13</td>
<td></td>
<td></td>
<td></td>
<td>ZN stain; Nil. Completed PTB Rx</td>
</tr>
<tr>
<td>15/01/14</td>
<td>147</td>
<td>8</td>
<td>65468</td>
<td>Treatment Failure.</td>
</tr>
<tr>
<td>27/07/14</td>
<td>91</td>
<td>7</td>
<td></td>
<td>Treatment Failure.</td>
</tr>
</tbody>
</table>
PSYCHO SOCIAL SUMMARY

• 2013; Poor Adherence by Pill Counting.

• 2014; Reported missing morning doses; She also complained about EFV dizziness. The father is a bus driver & Step mum does not care.

• Patient requested for a ‘grace period’ before switching to 2nd line.

• Limited adult supervision & support noted.
WAY FORWARD

• Switch to Duovir-N, Do baseline VL prior to 2\textsuperscript{nd} line switch

• Involve the father & step mother in care (scheduled counsellor visits)

• Repeat CD4 after 3 months.

• Introduce her to peer support, promote adherence.
Case 2

Acknowledgements:
Dr Naiga Fairuzi
Counselor Rose
22nd/ April/14
Demographics

Name: Nalwadda Solome, PIDC no: 1813

Age: 22/F  Sex: Female

Address: Wobulenzi, Luweero, N.O.K NB, Mother

Date of enrollment into care: 24/April/14

Current ART regimen: CBV/NVP

Clinical stage: III(PTB)

Mode of transmission: Vertical
Medical and ART history

Started ART on 06/July/04 - CBV/NVP

Vaginal candidiasis - 2004

• PTB - 2005
• Pregnant - 2009
• 2nd Trimester abortion - 2010 (May)
## CD4 Trends and VLs

<table>
<thead>
<tr>
<th>DATE</th>
<th>CD4 s(%)</th>
<th>Viral load</th>
<th>ART regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2004</td>
<td>24(2.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept 2006</td>
<td>408(27%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 2007</td>
<td>964(36%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 2008</td>
<td>941(36%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2007</td>
<td>901(42%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept 2010</td>
<td>647(29%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2011</td>
<td>521(25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 2012</td>
<td></td>
<td>674cp/ml</td>
<td></td>
</tr>
<tr>
<td>May 2012</td>
<td>389(26%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug 2012</td>
<td></td>
<td>726cp/ml</td>
<td></td>
</tr>
<tr>
<td>Nov 2012</td>
<td>358(26%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun 2013</td>
<td>219(19.98%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept 2013</td>
<td></td>
<td>16541cp/ml</td>
<td></td>
</tr>
<tr>
<td>Dec 2013</td>
<td></td>
<td>12130cp/ml</td>
<td></td>
</tr>
</tbody>
</table>
Psycho social summary

• Pt joined the clinic in 2004 when she was 13yrs after testing positive from Namungoona health center and was escorted by the parental aunt.

• At this point mother was in denial but later went to seek medical care at IDC, father’s status is unknown.

• In 2009, at the age of 18 years she delivered a baby who tested sero-negative and later d/c at 18mths.
Pyscho-social

• Patient was taken back to school but still got pregnant again in 2010, and pt is reported to have aborted.

• She was given a scholarship and joined vocational school for hair dressing.
Psycho social summary....

• Pt had history of adherence challenges with time mgt when she was still in O’ level because of school schedules and claimed food insecurity, yet mum had good adherence in the same home.
Discussion and wayforward

• Switch to an OD regimen; TDF/3TC/ATV/RI

• Involve her spouse, offer him RCT and if positive then enroll him into care

• Link to SRH team to sort out family planning issues
Case 3

Aknowledgement

Dr Naiga Fairuz

24th/Jun/14
Patient Bio-data

• A.C, 18/Female Registered with Baylor on the 24th/Nov/2004

• Was a Stage III at that time due severe bacterial pneumonia

• N.O.K - K.A who is the mother
Past Medical and ART history

• She has had no major OIs while in care

• She was initiated on ART on 21\textsuperscript{st}/FEB/14

• Has had no ART changes since initiation

• Still in stage III
## Laboratory results

<table>
<thead>
<tr>
<th>Date</th>
<th>CD4(%)</th>
<th>VIRAL LOAD</th>
<th>ART regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>9(0.7%)</td>
<td></td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2005</td>
<td>291(11.27%)</td>
<td></td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2006</td>
<td>648(25%)</td>
<td></td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2007</td>
<td>704(25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>789(28%)</td>
<td></td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2009</td>
<td>941(27%)</td>
<td>286cp/ml</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>685(27%)</td>
<td>&lt;20cp/ml</td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2011</td>
<td>831(28%)</td>
<td>TND</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>623(30%)</td>
<td>3505cp/ml</td>
<td>AZT/3TC/EFV</td>
</tr>
<tr>
<td>2013</td>
<td>369(16.03%)</td>
<td>130265cp/l</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>254(15%)</td>
<td>19807cp/ml</td>
<td>AZT/3TC/EFV</td>
</tr>
</tbody>
</table>
Psycho social summary

• Initially she had good adherence as mom was monitoring the medicine; she was still in primary school and was a day scholar.

• Poor adherence was noted when her CD4 started declining and she disclosed that she was getting dizzy with EFV of which she had given herself a drug holiday for that particular regimen.
Psycho social summary

• Her meds were kept by the school secretary. Adherence was assumed to have improved but it was not the case with EFV

• She seems to have restarted taking EFV well in Jan. 2014

• Is under preparations for 2nd line, she is in senior six and in boarding school
Way forward

• Has had adherence challenges especially in the boarding school

• Switch to an OD regimen - TDF/3TC/ATV/RI

• Reinforce adherence to the new drugs.

• Choose the most appropriate time for the drugs especially after a meal for Ritonavir.
CASE 4

• Switched to 2\textsuperscript{nd} line on 1\textsuperscript{st} April 2014

• Acknowledgements:
  - Kiconco Lilian (Clinical Officer)
Dermographics

- Name: L.C; PIDC no. 7429; Age: 21 yrs; Sex: Male
- Address: Kayunga
- NOK: Initially Sister, then father
- Date of enrollment in care: 25/10/2005
- Current ART regimen: AZT/3TC/EFV
- Clinical stage: 3 at initiation of HAART
Medical and ART History.

• Medical history:
  - No major clinical events since HAART
  - Last reviewed 21/9/2012

• HAART History:
  - Duration on HAART 8 years, 8 months.
## Labs

<table>
<thead>
<tr>
<th>Date</th>
<th>CD4</th>
<th>Viral load</th>
<th>ART regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/8/2006</td>
<td>244</td>
<td></td>
<td>CBV/EFV</td>
</tr>
<tr>
<td>14/2/2007</td>
<td>433</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29/8/07</td>
<td>396</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/2/08</td>
<td>666</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/9/08</td>
<td>580</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19/3/09</td>
<td>550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/9/09</td>
<td>436</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30/3/10</td>
<td>698</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/10/10</td>
<td>410</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/4/11</td>
<td>312</td>
<td>15,927</td>
<td></td>
</tr>
<tr>
<td>26/10/11</td>
<td>230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/4/2012</td>
<td>254</td>
<td>28,807</td>
<td></td>
</tr>
<tr>
<td>27/3/2014</td>
<td>42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Psychosocial

• Aug 2011: Family house got burnt

• Sept 2011: Joined a gang, and became irregular in the clinic

• Feb-Aug 2012: Confessed poor adherence, had been arrested for 7mo for pick pocketing.

• Dec 2012: Told Home Health Visitor he did not want to come back to the Clinic anymore
Management Plan

• Do baseline VL and Re-start on current regimen i.e CBV/EFV

• Repeat VL after 3 months of good adherence VL still detectable then we switch to 2nd line [TDF/3TC/ATV/r].

• Meanwhile empower the boy, explain the meaning of life and encourage to attend peer support meeting.

• Involve treatment buddies.

• Request for a home visit.
Summary

• Non-Aderence is the major cause of treatment failure

• Disclosure improves adherence; issues of boarding schools should be addressed

• Integration of SRH services in the HIV clinic is critical

• Safe and easy regimens improve adherence
Adherence requires discipline, determination and support from family and significant others.
HOW TO ASSESS?

Before administering long term medication ensure family readiness:

• Has the caregiver disclosed to the child.

• Do other people in the household know about the child’s diagnosis?

• Does patient/family want to start therapy?

• Does the patient/family have a support system?

• What are the living conditions of the patient or family.

• Does the patient/family have transport?
The Importance of adherence

• Maintaining excellent adherence to HAART is the single most important factor in ensuring successful treatment outcomes.

• In ART a patient should achieve 95% adherence to achieve virologic suppression and avoid emergence of resistance.

• Short-term lapses in adherence may lead to resistance to medications and loss of treatment options.
Benefits of Good Adherence

• Maintain or reverse immune system damage
• Virologic suppression
• Increases CD4 cell count
• Decreases opportunistic infections
• Promotes growth and development
Dangers of non-adherence

• Viral resistance

• HIV/RNA not suppressed to undetectable level after 6 months of HAART

• HIV/RNA level becomes detectable after being undetectable

• Increase in HIV/RNA level

• Decrease in CD4 cell count
Role of a Family in Adherence

• Motivate and reward the child for good adherence.

• Provide physical care for the child including administration of complex regimens.

• Provision of psycho-emotional and social support.

• Provide financial support for associated costs including
Disclosure of HIV Status to Children and Adolescents.

In general children with chronic and life-threatening diseases benefit from early disclosure
Why?

• Better understanding of the medical condition

• Better psychosocial adjustment and self-esteem

• Potential for more open involvement in medical care decisions

• Increased opportunities for peer support

• May allow for closer relationship between child and
When?

There is no “right” age for disclosure!!!!

Disclosure is a process and there is always an age-appropriate way to communicate about chronic illness to children.
When?

“I will do it when she is ready.”
How?

• Age appropriate

• Incremental

• Supportive

• Involving the family and the health care team
SOLDIER

Acknowledgements,

Baylor-Botswana
Becoming sick
LACK OF ADHERENCE AND OIs
Fear to Start on ART because of Toxicities (Acceptability)
Severe gynaecomastia in a 12 yr old boy on Cart
Courtesy photo from ARROW TRIAL
Psychosocial challenges

- Multiple caretakers if orphans
- Children become the caretakers to sick parents
- Stigmatization in school
- Depression and disclosure
- Poverty
  - Lack of school fees

Skovdal M et al. Global Health 2009
Adherence requires discipline, determination and support from family and significant others.