ADOLESCENTS WITH HIV

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Right to Care
Disclaimer

• This talk represents my personal experience in managing teenagers with HIV over the last 14 years.

• It does not purport to be a comprehensive treatise on the management of teenagers with HIV.
<table>
<thead>
<tr>
<th>Horizontally Acquired</th>
<th>Vertically Acquired</th>
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</thead>
<tbody>
<tr>
<td>• Usually Normal height</td>
<td>• Usually short</td>
</tr>
<tr>
<td>• Normal development</td>
<td>• Delayed Puberty</td>
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<tr>
<td>• CD4 often normal</td>
<td>• CD4 often low (if not on ART)</td>
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<tr>
<td>• ART naive or less experienced</td>
<td>• Often highly ART experienced</td>
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<tr>
<td>• Relatively easy to suppress virus</td>
<td>• May have multiresistant virus</td>
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<td>• Sexually active (may have been abused)</td>
<td>• Whole spectrum of sexual activity</td>
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<tr>
<td>• Pill fatigue less likely</td>
<td>• Pill fatigue likely</td>
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<tr>
<td>• Adherence problems</td>
<td>• Adherence problems</td>
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</table>
Adolescents with HIV

- Speaking to teenagers
- Dosing and regimens for adolescents
- Adherence
- Disclosure
- Pill fatigue
- Depression
- ADHD
- Treatment failure
- Sexuality
- Adolescent Groups
- Transitioning to adulthood
Speaking to teenagers

• No disturbances
• Kick out adults if necessary
• Confidentiality
• Make eye contact
• Remove physical barriers
• Speak on their level but don't talk down to them
Adherence in Teens

• **Simplify!**
  – once daily dosing
  – Fixed Dose combinations
  – Reduce no of tabs to a minimum
  – No food restrictions/Medication all taken together
  – Fit meds into Teens lifestyle
    • Find out what their lifestyle is
  – Twice daily does not = 12 hourly

• **Supervision**
  – Treatment Buddy
  – Watch them swallow

• **Disclosure**
  – Complete
  – Partial
Drug Formulations

• Tablets/caps not syrup
• 3TC/ABC FDC- Kivexa®
• TDF/FTC FDC Truvada®
• TDF/FTC/EFV FDC Atripla®
• EFV 400mg from 25kg (2 caps instead of 4)
• EFV 600mg from 35kg
• ddI EC instead of buffered tabs
  • Less GI side effects
  • Still give on empty stomach
  • Can give simultaneously with Aluvia (on empty stomach)
Kivexa®

- Fixed dose Combination tablet 3TC & Abacavir
- 300mg 3TC/600mg Abacavir per tablet
- Dose: 1 tablet once a day
- Very large tablet
- Use from 20kg if child can swallow it
- Expensive
Stocrin® tablets and Aspen Efavirenz Tablets

- Efavirenz
- 600mg tablet
- Large tablet
- Use from 40kg if child can swallow it
Aluvia®

- Lopinavir/Ritonavir tablet (Kaletra)
- Melt extrusion technology
- Lopinavir 200mg/Ritonavir 50mg per tab
- Stable out of refrigerator
- Adult dose 2 tabs bd (Kaletra caps 3 caps bd)
- Tabs Slightly smaller than Kaletra caps
- Can be taken with or without food
- Tablets cannot be broken
- Paediatric formulation (100/25) registered with MCC
Viread®
Tenofovir

• Nucleotide Reverse transcriptase inhibitor
• Concerns about osteopaenia in children
• Renal toxicity in adults and children – worse in children < 5 years
• Dosage 8mg/kg/dose once daily
• No paediatric formulation
• Tablet awkward shape to divide
• 1st line in adults
• Can use routinely from age 16 if weight > 37.5kg
• WHO says use from 12 years
• Reserved for salvage in older children
• Urine dipstix and U&E 3 monthly
• Dexa scan 6-12 monthly
Truvada®

- Fixed dose combination tablet- Tenofovir and FTC
- FTC equivalent to 3TC
- 300mg tenofovir / 200mg FTC per tablet
- From 37.5 kg in situation where one would used TDF & 3TC
Disclosure

- A process - not a once off event
- Depends of maturity - not age
- Parents often resistant to disclosure
  - Guilt
  - Worries about child disclosing indiscriminately
- Barriers to Communication
- Dishonesty
- Full disclosure needed by time sexually active
- Partial disclosure adequate before that
- Parents not at all resistant to partial disclosure
- Books and audiovisual material may be useful
Partial disclosure

- Clinicians should be involved
- Pitch it at the child's level
- Use language that the child understands
- Use terms like white cell count rather than CD4 count
- Talk about germs rather than bacteria
- With time add to the story
- Make a note in the file how far you are in the story
- Test the child on what they learned last time and revise
- Example
Note

• This example may not be appropriate in those countries where soldiers have a negative connotation
Blood

Red blood cells
White blood cells
Platelets
White Cells = Soldiers
Soldiers kill Germs & keep us well
Very few White Cells = few Soldiers
Few soldiers = many germs
Many germs = person gets sick
Pill Fatigue

- A condition occurring over time to chronically ill patients who have to take a lot of medication, in which the patient stops taking pills because of the stress and monotony of constant pill swallowing.
Pill Fatigue- Causes

Major obstacle to complying with treatment every day is:
- too many pills - 67%
- side effects -61%
- food restrictions -55%
- frequency of having to take the pills -49%
- timetable for taking pills-48%
- Cost- 1%
- drug regimen interferes with their daily life-43%
- lifestyle -30%
- job-11%

GSK Survey
Pill Fatigue- Treatment

too many pills – rationalize, drop non-essentials, FDC
side effects – identify and change offending agent
food restrictions - change offending agent
frequency of taking the pills – rationalize, change to once daily if possible
timetable for taking pills- as above not fixed times
Cost- 1%

drug regimen interferes with their daily
  life-43% as above, twice/once daily not fixed times
  lifestyle -30% as above
  job-11%

If above fail then what?

GSK Survey
Drug Holidays

• Long term Structured Treatment Interruptions (STIs) not recommended (SMART study)

• Short term ± 1month probably doesn't cause harm if done properly
  – Negotiate good time to do it
  – Do in conjunction with HCW
  – Drug holiday dependent on good adherence other times
  – PI regimen - stop all drugs simultaneously
  – NNRTI regimen - stop NNRTI 1 week before stopping others or substitute PI for NNRTI 1 month before stopping regimen
  – NVP – if interrupt for more than 7 days need to restart lead in once daily X 2 weeks
Depression
Mental Health in HIV infected Children

• Review of 8 studies including 328 HIV infected children 8-21 years

• Mental Health Disorders
  – Attention Deficit Disorder 24%
  – 6 fold increased risk ratio

• Anxiety Disorder 29%
  – 3.8 fold increased risk ratio
  – **Depression 25%**
  – 7.1 fold increased risk ratio

AIDS Care 2006:18:441-5
Attention Deficit Hyperactivity Disorder ADHD
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AIDS Care 2006:18:441-5
Attention Deficit Hyperactivity Disorder ADHD

• Rebellious 16 year old- ADHD worse in teenagers
• Impacts on disclosure
• Impacts on Adherence
• Often associated with Depression & poor self image
• Easily managed if recognized
Treatment Failure
Treatment Failure

• Almost inevitable in teenagers
• Rather prevent it-watch them swallow
• Don't Blame child if it happens
• Don't shout at Child
• Rather say-"I was expecting this. Don't worry it happens to many people"
• Your chances of success are much higher if you have an intact relationship with the child
Treatment Failure-Options*

- Different in adolescents
- New regimen
  - Last resort. only do if CD4 extremely low
  - Need to resolve adherence issues first (easier said than done)
- Delay new regimen
  - Treatment interruption
  - 3TC Monotherapy
  - Holding regimen

*Speakers personal opinion
Structured Treatment Interruptions

• Out of favour for adult patients (SMART study)
  – Avoid in Multidrug experienced patients with low CD4 counts
  – Paediatric patients with immune reconstitution and virological failure

• ? Superseded by 3TC monotherapy

• Consult an Expert
M184V mutation

- Hallmark 3TC resistance mutation
- HIV virus with M184V has reduced viral fitness i.e. it replicates at a reduced rate
- E184V study showed that patients who had failed 3TC previously and were kept on 3TC monotherapy didn't not progress as rapidly as patients on no ART at all.

AIDS 2006, 20:795-803
3TC Monotherapy

- Patient must have failed 3TC previously
- A type of holding therapy
- Await availability of new drugs
- or
- Wait for patient to learn to swallow capsules
- Or
- waiting for Teens BCUTB
- Only institute if CD4 reasonable
- Do 3 monthly CD4 test
- Dont do VL testing
- Once CD4 drops or patient develops symptoms then institute definitive regimen
- Consult an expert
Holding / Bridging Regimen

Simplified regimen
• Unlikely to develop further resistance
• Await availability of new drugs
• Wait for patient to learn to swallow capsules
• Wait for Teens BCUTB
• E.g. AZT/3TC/ABC or AZT/3TC/ABC/TDF where there is extensive NRTI resistance
• Trizivar (Abaclamzid) 2 tabs a day, TDF 1 tab a day
• Ideally only institute if CD4 reasonable
• Do 3 monthly CD4 test
• Don't do VL testing
• Once CD4 drops or patient develops symptoms then institute definitive regimen
• Consult an Expert

HIV Medicine (2008), 9, 508–513
Directly Observed Therapy (DOTS)

• Especially in older children
• Once daily regimen
• FDC tabs
• Drugs amenable to once daily dosing
  – 3TC
  – FTC
  – ABC
  – Efv
  – Kaletra (PI naïve patients)
  – ATV/rtv (PI naïve patients)
  – TDV
  – ddi
Sexuality
Effect of HIV on Sexuality in the Perinatally Infected Teen

- Impaired body image—lower self esteem
- Delayed puberty
- Threatened sexual intimacy
  - Transmission issues
  - Disclosure issues
Teen Perspective

Sexuality

• Anxiety regarding
  – Sexuality
  – Sexual relationships
  – Reproductive and sexual functions
HCW Responsibility
Guidance

• Discuss sexual anatomy and function.
• Discuss and provide or refer for contraception.
• Teach facts about transmission & safe and responsible sex.
• Sexual identity. Perinatally infected teens may be gay or bisexual.
Adolescent Groups
Adolescent Groups

- Teens only communicate with other teens
- Peer Pressure
- Peer Counsellors
- All have similar anxieties, fears, questions
- Eg: Sexuality, prognosis, child bearing, disclosure, preventing transmission, transitioning to adults
- Logical to discuss these in a group
- Run by responsible person that teens trust
- Can be run by older teens themselves with adult supervision
- Set programme of topics for discussion
Transitioning to Adult Clinic
Transitioning to Adult Clinic

• ? More traumatic for caregivers than patients
• Fear that new caregivers wont be able to manage patient
• Perhaps easier in family based clinics where no transitioning occurs
• Needs clear communication between patient, old clinic new clinic
Summary

• Adolescence is a challenging time for teen, parents doctor, nurse
• All the more so in situation of HIV
• Teens break many rules
• Sometimes we have to break rules to deal with teens
• Can be very rewarding when things go right
• Only consider that you have achieved success when patient turns 30!
Acknowledgement

- Dr Rana Chakraborty: Adolescent HIV Care; from the Cradle to the Rave!!. PowerPoint presentation for CHIPS. Downloadable at www.freeppts.net/s-adolescence-aids-61.html
Thank you

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