Nelfinavir: Where are we now? Experience in Ghana

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Outline

• HIV/AIDS – The Ghanaian Situation
• Pharmacovigilance System in Ghana
• Brief on Nelfinavir Use
• Brands Registered by FDB
• Safety Issues with Nelfinavir
• Future Actions
• Conclusions
Tropical Climate
Estimated population 22 million
HIV/AIDS Situation in Ghana 1

- National HIV sero-prevalence 1.9 (2008)
- Prevalence rural being 1.7% and urban 2.3%
- 264,481 people living with HIV/AIDS, with 110,666 males and 153,851 females
- 16,974 children living with HIV
- 2959 annually HIV positive births
- Cumulative AIDS deaths of 180,889 (2007)
- 12,315 HIV/AIDS patients on ART
HIV/AIDS Situation in Ghana 2

- VCT Services – 161,903 services received
- 10% of tested positive (71% women)
- PMTCT – 104,045 pregnant women screened
- 3.2% tested positive
ART Provision Sites

• 95 centres distributed throughout the country (public, private and not-for-profit health institutions)

• ART provision started in four pilot facilities

• Gradual roll out nationally

• Four pilot sites
  – Atua Govt Hospital, St. Martins Hospital Agomenya, Korle-Bu Teaching Hospital, Koforidua Hospital
ART Provision Sites

• Others (8)
  – Komfo Anokye Teaching Hospital
  – Tamale Teaching Hospital
  – Ridge Hospital
  – Police Hospital
  – Sunyani Regional Hospital
  – Western Regional Hospital
  – Central Regional Hospital
  – Effia Nkwanta Regional Hospital
ARV Use in Ghana

FIRST LINE DRUGS
First choice drugs
• 1. Zidovudine + Lamivudine + Nevirapine
• 2. Zidovudine + Lamivudine + Efavirenz

Second Choice drug
• 1. Stavudine + Lamivudine + Nevirapine
• 2. Stavudine + Lamivudine + Efavirenz

SECOND LINE DRUGS
First Alternative
• 1. Abacavir + Tenofovir + Nelfinavir
• 2. Abacavir + Tenofovir + Lopinavir/r3

Second Alternative
• 1. Didonosine + Abacavir + Nelfinavir
• 2. Didonosine + Abacavir + Lopinavir/r
ARV Use in Ghana

DRUGS FOR POST HIV EXPOSURE PROPHYLAXIS (PEP)

Low Risk/High risk

Zidovudine 300 mg bid +
Lamivudine 150 mg bid (28 days)

*Nelfinavir* 750 mg tid or 1250 mg bid x 28 days
Or
Lopinavir/r 400/100 mg 12-h 28 days
Brands registered in Ghana

• Viracept 250mg tablets
  • F. Hoffman La-Roche Pharmaceutical Ltd.
  • Registered September 2005

• Nelfinek 250mg caplets (locally manufactured)
  • Danadams Pharmaceutical Industry Ltd. Ghana.
  • Registered November 2005

• Nelvir 250mg tablets
  • Cipla Limited
  • Registered October 2005
Safety Monitoring for ARVs

• Active Studies
  – One study in 2007 funded by the Ghana AIDS Commission in collaboration with the University of Ghana Medical School

• Passive monitoring of adverse reactions by the National Pharmacovigilance Centre by use of the suspected adverse reaction reporting form – Ghana’s “yellow card” system
Active Studies

- Intensive solicitation of AEs from 4 sites
  - Healthcare workers trained by PV Centre on need to report
  - How to report and complete ADR forms
- Patients on ARVs followed up when they report to collect their ARVs
- Any observed AEs recorded (by health workers)
- Pharmacovigilance team visits health facilities fortnightly to
  - Collect reports of AEs to ARVs
  - Record outcome of AEs
  - How AE was managed including whether therapy was stopped or switched
Results – All ARVs

• 73 patients in the 4 sites reported 104 AEs
  – (Collection period March to September 2007)
  – Several patients reported more than one AE

• AEs most frequently reported include:
  – Anaemia (20.48% of patients)
  – Peripheral neuropathy (14%)
  – Diarrhoea/vomiting (8.43%)
  – Loss of appetite (7.23%)
Nelfinavir-specific AEs

• 4 reports
• Combivir/Nelfinavir (2)
  – Vomiting, dizziness, insomnia, conjunctival pallor, anaemia
• Stavudine/Lamivudine/Nelfinavir (2)
  – Numbness of fingers
Nelfinavir AEs from Spontaneous Reporting

• One case of suspected adverse reaction was reported to the National PV Centre (Feb, 2006)

• Description of reaction
  – 40 year old female 60kg. Patient experienced pedal oedema, exfoliative dermatitis, seizures
  – Was also being treated for dysphagia, candidiasis and anaemia
  – Outcome : Recovered
Product Quality Monitoring System in place for ARVs

• Product Quality Complaint Form
  – Given to Central Medical Stores for distribution to all purchasers of ARVs including Nelfinavir
  – Encouraged to report any suspected quality issues to the Regulatory Authority

• One quality issue experienced
  – Destruction of 64 packs of Viracept of batch no. E111 in October 2007 as a result of worldwide recall of Viracept
  – Recall was due to presence of an impurity (ethyl methanesulfonate) found in Viracept.
Number of Patients on Nelfinavir

• TOTAL 53
• Military Hospital -1 (therapy change)
• Ridge Hospital -10 (PEP)
• Teaching Hospital - 20 (18 therapy change 2 PEP;)
• Atua Hosp - 12 (8 therapy change; 4 PEP)
• Komfo Anokye - 10 (2 therapy change; 8 PEP)
Future Monitoring activities

• Proposal for active monitoring of all HIV medicines in collaboration with the National AIDS Control Programme
  – Cohort Event Monitoring in selected sites nationwide
  – Focus on ALL combinations NOT just for nelfinavir

• Intensified promotion of the national spontaneous reporting system for all medicines including ARVs

• Continued post-registration quality monitoring of ARVs
Observations – I

• Nelfinavir is used as a second line treatment in Ghana and also for PEP in high risk groups

• Few adverse events reported
  – 4 from active follow-up
  – 1 from spontaneous reporting

• Most HIV treatment centres are still using 1st line treatment so do not stock Nelfinavir
  – Patients doing well on 1st line
  – No cause for switching
Observations – II

• ARVs mainly obtained through the Ministry of Health procurement system
  – All MOH procured drugs are registered
  – Procured drugs are subject to FDB quality analysis prior to distribution from the Central Medical Stores

• FDB member of the Ministries tender evaluation committee
Observations – III

• All nelfinavir products on the market have been registered by the FDB

• Only quality issue was with Viracept during the worldwide recall

• No other safety issues have been observed
Future Actions

- Currently, no need for any special studies on nelfinavir due to low usage and low frequency of reported adverse events
- “Watchful Waiting” being carried out by PV Centre
- Issues raised through WHO/UMC will continue to be discussed with Technical Advisory Committee on Pharmacovigilance
- Necessary regulatory actions will be taken on advice of Committee
- FDB will continue to monitor and support existing public Health Programmes including National AIDS Control Programme
Conclusion

• Nelfinavir not widely used in Ghana
• There are currently no public health concerns on nelfinavir use in Ghana
• However continued vigilance on nelfinavir and other ARVs due to long term treatment and the fact that these medicines are new in Ghana
• Continue encouraging spontaneous reporting and implement the proposed CEM studies for ARVs.
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