Lessons learned from CAMELIA
Clinical trial implementation in Cambodia.

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Background

CAMELIA trial (CAMbodia Early vs. Late Introduction of Antiretrovirals, ANRS 1295 / DAIDS-ES ID 10425)

- International clinical trial
- Co-sponsored by the French National Agency for Research on AIDS and viral hepatitis (ANRS) and the US National Institute of Health (NIH)
- Primary objective is to determine the optimal time to initiate HAART in previously untreated HIV-infected adult patients with tuberculosis (TB) and low CD4
- Conducted by the Cambodian Health Committee, a local NGO, and the Cambodian-French Pasteur Institute
- Written in 2003, approved by National Ethics Committee in Dec. 2004
Study design - 660 patients

- prospective, randomized, open-label, two-armed trial without placebo
- strategy trial designed to prove the superiority of Early initiation of ARV Vs. Late initiation in terms of mortality

**ARV**  
D4T-3TC-EFV

**Early**  
Rd

**Late**  
Consider ARV switch

**TB treatment**  
2EHRZ/4HR

Day 0  
Week 2  
Week 8  
Week 26  
Week 50  
Week 58  
Week 78  
Follow-up (every 6 months after week 78)

Rd : Randomization  
H : isoniazid  
Z : pyrazinamide  
R : rifampicin  
E : ethambutol  
D4T : stavudine  
3TC : lamivudine  
EFV : efavirenz
Study sites

Conducted in 5 hospitals in Cambodia

- 2 in Phnom Penh
  - Khmer Soviet Friendship
  - Calmette
- 3 in Province
  - Svay Rieng
  - Takeo
  - Siem Reap
Renovation of wards

- Renovation of KSFH pneumology ward and Svay Rieng infectious ward
- Equipment of laboratories: labs have been renovated and were equipped with optimal sensitivity AFB detection devices (concentration and Auramine fluorescence microscopy).
- Mycobacterial liquid culture set up in IPC.
Training

32 Doctors
2 Pharmacists
13 Nurses
6 Monitors
15 Laboratory technicians
3 Laboratory Managers

More than 70 Cambodian Health Staff received training from specialists through CAMELIA clinical trial

53 % were MOH staff,
47 % were NGO or private institution staff
Lab tests and treatments

- Lab tests performed:
  • systematic mycobacterial identification
  • MTB drug susceptibility testing (DST)
  • routine HIV1 viral load
  • genotyping in case of failure

- Treatments:
  • ARV and antituberculosis regimens follow NCHADS and CENAT guidelines
  • FDC generic drugs are used
  • TB MDR treatment are available
  • Improved drug storage (temperature monitoring)
Collaborations

- Locally:
  - Ministry of Health : NCHADS and CENAT
  - MSF Belgium
  - Sciences Faculty / Biomérieux Lab

- International collaborations
  - Institut Pasteur PARIS
  - Harvard
  - ESTHER
  - OFCP
Linked Scientific studies

- **PECAN - ANRS 12 154**: Dr Taburet & Dr Chou
  - Relationship between nevirapine or efavirenz pharmacokinetics and drug metabolizing enzyme genetic polymorphism in a population of HIV infected Cambodian patients

- **CAPRI NK - ANRS 12 153**: Dr Daniel Scott Algara & Dr Eric Nerrienet
  - Camelia Associated Paradoxical Reactions Immune NK Study

- **CAPRI T - ANRS 12 164**: Dr Anne Goldfeld & Dr Pean Polidy
  - CAMELIA Associated Paradoxical Reaction Immune T Study
Lessons learned

- The CAMELIA trial addresses a clinically relevant question in the Cambodian context where HIV TB co-infection is frequent with simple treatments now largely available in the country which should enhance future implementation of results at a public health level.

- It demonstrates the feasibility of international standard clinical trials in Cambodian national settings.

- It enabled:
  
  - development of a TB HIV clinical network between capital and provincial hospitals
  
  - strengthening of links between TB and HIV wards within the hospitals as well as between clinicians and laboratory staffs.
Lessons learned

- As often, a clinical trial is a unique way to introduce new techniques and diagnosis algorithms, and access to specific treatments (MDR treatment).

- Timeframe:
  - 1st patient has been enrolled in Jan. 2006,
  - enrolment is expected to finish in mid 2009
  - the overall study should finish by mid 2010

- The CAMELIA trial will help to provide part of the answer to a main question and its result is expected by the medical and scientific community worldwide. It is a great opportunity for Cambodia to provide this answer, thanks to the involvement of all the partners.
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<td>Sok Thim (South)</td>
<td>Borand Laurence</td>
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<td>MECs: CHEA Sokeo</td>
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<td>MEB: Men Nimulroat</td>
<td>- 4 MECc: Saman Manil</td>
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<td>AQ CD4: Pean Polidy</td>
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<td>BK: Sar Borann</td>
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<td>Hémato: Srey Chanthorn</td>
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<td>Bactério: Guillard Bertrand</td>
<td>- 1 data manager: Pheng Phearavin</td>
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<td>Viro: Nerrienet Eric</td>
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<td>Biotheque: Noujin Janin</td>
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<td>PK: Taburet Anne-Marie (Bicetre)</td>
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