agricultural and/or waged work. As women are also the primary carers in the family, the impact of tuberculosis is severe for individual families as for society in general.

Evidence of gender disparities from studies in collaboration between Karolinska Institutet and Hanoi Medical University as well as from the literature include that TB disease in some contexts could influence possibilities to marry, to stay married and even so via proxy, since in particular women in a family with TB disease would face barriers to marriage. Married women with TB may be at risk of divorce, of their husband taking a second wife, or of being sent to their natal homes. In Pakistan, marriage prospects as perceived by parents influence treatment taking among unmarried children.

Conclusions: Gender dynamics are thus key factors affecting the risk of a person becoming infected and developing tuberculosis as well as his or her access to health information, health-seeking behaviour and treatment outcome. In addition, gender norms and gender inequality influence coping capacities and the social consequences of having tuberculosis.

Future research needs include: Population-based studies in multiple settings together with sentinel surveillance activities are recommended to get unbiased data on TB incidence and prevalence. Semi-active case-identification in target populations, acknowledging the devastating effects of the interaction between gender and HIV, eg. TB screening linked to PMTCTMore basic science initiatives to investigate sex differences in immune response to infection and determinants of disease development and the link to sex specific hormone levels

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Session: Gender Differences in Infectious Diseases
Date: Saturday, April 5, 2014
Time: 10:15-12:15
Room: Room 1.60

Sex differences in antiretroviral therapy efficacy and toxicity

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The development of effective combination antiretroviral therapy (ART) has transformed the management of HIV infection over the past twenty years, yet many challenges remain. Globally women comprise half of all people living with HIV, yet women have been underrepresented in most clinical trials evaluating the efficacy and safety of ART. More recently several groups of investigators have designed and analyzed clinical trials with a goal of evaluating sex difference in ART. These studies have suggested differential rates of toxicity in women and men and some important differences in response rates to standard treatments. This presentation will review recent findings on sex differences in the pharmacokinetics of protease inhibitors and non-nucleoside reverse transcriptase inhibitors and highlight sex differences and efficacy from recent clinical trials. Finally research priorities in the area of sex differences in HIV therapy will be suggested.

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Room: Room 2.40

Rickettsioses in Africa: A paradigm of new or emerging infectious diseases

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Rickettsioses were considered 20 years ago as being rare diseases with one species of Rickettsia transmitted by ticks, per continent. Modern tools have been disrupting the perception of the world of rickettsioses. The first works were performed directly on biting arthropods (ticks, flea, mites) that helped to identify a number of microorganisms putatively involved in human diseases. This difficulty to use classical tools for diagnosis in patients (such as culture), prevented for a long time the identification of human cases. The development of molecular tools based on skin (biopsies and swabs), and blood shows the huge frequency of rickettsioses. In rural Asia, rickettsioses (scrub typhus and murine typhus) are among the most frequent cause of unexplained prolonged fever. In western and eastern Africa, rickettsioses (mainly \textit{R. felis}) are the
second cause of fever in rural areas after malaria. In many other countries such studies have not yet been conducted. The identification of *R. felis* in mosquitoes questions their role in this disease. In practice, because of their difficulty of diagnosis, rickettsioses were considered, during the greater part of the 20th century, as rare diseases. In reality, they are among the most commons in travellers as a cause of fever, as well as in people, worldwide, in contact with biting arthropods. Finally the current pitfall in this field is the misuse of nested PCR that generate many false positive diagnosis and should be avoided.

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**Role of delocalized point of care diagnosis of Rickettsioses in Senegal (Africa)**

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A growing range of rapid diagnostic tests can be performed at the Point-of-Care laboratory (POC) to elucidate the etiology of febrile conditions. In tropical Africa, the spectrum of the bacterial pathogens causing fever is poorly understood and molecular-based diagnostic laboratories are rare, the time lag between test results and patient care is a critical point for treatment of disease. This study provides the activity report of a POC in a rural Senegal village, the information for its implementation in field conditions and describes the methodology used to organize the running of this new biomedical technology in response to the needs of rural African healthcare. Based on accumulated knowledge of the repertoire of microbial causes of febrile diseases in rural Senegal, we implemented the rural POC in Dielmo (Senegal) to decrease the time lag between test results and patient care. From February 2011 to May 2012, 563 blood specimens from febrile patients were collected in Dielmo and Ndiop villages. All samples were screened for *Borrelia* spp., *Coxiella burnetii*, *Tropheryma whippelii*, *Rickettsia conorii*, *R. africae*, *R. felis*, and *Bartonella* spp. We identified DNA from at least one bacterial pathogen in 120/563 (21.3%) of the samples from febrile patients. *B. crocidurae* was identified in 59 cases (10.5%), and *R. felis* in 36 cases (6.4%), *Bartonella* spp. in 22/563 cases (4%), *C. burnetii* in 2 cases (0.3%) and *T. whippelii* in one patient (0.2%). *R. africae* and *R. conorii* were not detected. Among 8 co-infected patients, 5 were co-infected by *R. felis* and *B. crocidurae*, 2 by *B. crocidurae* and *Bartonella* spp., 1 by *B. crocidurae* and *C. burnetii* and 1 by *R. felis* and *B. quintana* in 1. We report the proof of concept of POC in rural tropical Africa. Diagnosing that 21.3% of acute infections can be successfully treated with doxycycline should change the treatment strategy for acute fevers in West Africa.

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**Can pediatric HIV be eliminated?**

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The World Health Organization (WHO) has called for the “virtual elimination” of pediatric HIV. Virtual elimination, an ambitious program encompasses the goals of reducing the number of new child HIV infections by 90% by 2015 and to reduce perinatal transmission to rates of less than 5%. To achieve this will require: 1) efforts to decrease primary HIV infection in young women; 2) the prevention of unintended pregnancies in HIV infected women; 3) the reduction of perinatal transmission; 4) optimal care for families infected with HIV. This will require significant resources at a country level aimed at health systems strengthening, especially in countries with a high burden of HIV. Improving access to contraception and universal HIV testing for women of child bearing potential will be a critical component to achieving this. Ensuring that all pregnant women attend antenatal care, receiving regular HIV testing during pregnancy and timely triage into antiretroviral care without seepage will help to drive perinatal transmission down. Preventing post-natal transmission through breastfeeding and retention in care of both mother and infant are critical. This talk will look at the barriers and challenges to eliminating pediatric HIV as well as looking at strategies for potential pediatric cure.

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**Rickettsial disease in febrile patients in Africa with or without malaria**

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Presenter did not provide an Abstract

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