AIDS Control in China

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HIV/AIDS were first detected in China in the mid 1980s among foreign travelers and hemophilia patients. The epidemics started among IDUs in southwest China in the late 1980s. The 2nd wave of the epidemic was in the paid plasma donors in central China in the mid 1990s. While the IDU epidemic keeps at a high but relatively stable level, sexual transmitted HIV cases in both CSW and MSM have increased rapidly in recent years. In 2007, sexual transmission has become the largest portion of newly reported HIV infection for the first time. All signs indicate that the HIV epidemic in China is at a turning point, spreading from high risk groups to the general population. By the end of 2007, the estimated number of HIV infected people in China was 700,000.

In order to control AIDS, China has launched an impressive AIDS campaign, called Four Free One Care (free VCT, ART, PMTCT and education for AIDS affected children, living assistants to AIDS family). More high risk population has been tested and the positive ones have received various intervention package, including condom, methadone substitutions and needle exchange programs. More than 40,000 patients have been experienced triple drugs therapy and thousands of lives have been saved. Even though progress has been made, challenges remain at both societal and technical levels. The rapid increasing STI cases indicate further spread of HIV in the future. Due to drug toxicity and HIV resistance, over 20% of patients have stopped treatment. Additional effort and strategy are needed to further increasing prevention coverage in both high risk groups and general population. Only with enhancing scientific research and evidence-based strategy, can China seize the opportunity to stop AIDS at the critical time in China’s AIDS control history. International collaboration between scientists, NGOs and governmental agencies will help China reaching her AIDS control goal earlier and better.

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Antibiotic Practices and Resistance in Areas of Unstable Health Infrastructures (invited)

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Background: Major health problems of Cambodia include TB with 400-600 new cases per 100000/year, HIV/AIDS and Pl. falciparum resistant malaria. Concerning antibiotic policy, Ministry of Health guidelines exist and also WHO/UN/CDC guidelines are adopted in the clinical practice. The number of physicians is low due to genocide 25 years ago when 1,8 million of inhabitants and virtually all doctors, nurses and health care workers were executed. All antibiotic classes are available in the market, 90% of them generic, however with good quality, manufactured in Thailand and India and containing 85–100% of the original substances. Antiretrovirals, but not antibiotics, antituberculotics and antimalarial are available for free from the government or NGO’s.

Methods: Study participants were HIV positive Cambodian children treated with HAART ( stavudine, lamivudine and nevirapine or efavirenz). We assessed antibiotic resistance rates in respiratory tract isolates (nose, pharyngeal, ear swabs) from 93 Cambodian previously ART naive children.

Results: Antibiotic resistance rates investigated in 93 Cambodian HIV infected children in 2007 were extremely high, including ESBL and Ciprofloxacine resistance in Enterobacteriaceae spp. up to 100% and MRSA up to 80% with bifphasis tendency and sustained decrease of resistance with the increase of the population receiving HAART.

Conclusion: Reversibility of resistance among isolates from respiratory system was probably due to the reconstitu-
Antibiotic Practices and Resistance in Genocide Areas of Darfur and Southern Sudan

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Background: Due to 21 years of civil war in southern Sudan and 5 years conflict of Darfur, health care infrastructure in southern and western Sudan was destroyed. St. Elizabeth University Tropical programmes involve 2 hospitals in South Darfur (Nyamilel, Gormdi) and 2 in Bahr Al-Gazal in southern Sudan (Mapuordit, Marialou), with patient flow of 35,000 a year. Antibiotic policy is based on WHO guidelines in those hospitals but no community health service is available yet and vaccination was sporadic or none.

Methods: On the market 4 antimicrobial drugs are available as OTC - Doxycyclin, Ampicillin, Cotrimoxazole and Cloroquine. We have tested 400 isolates from patients from this area as of antibiotic free environment.

Results: All isolates of Str. pneumoniae were Penicillin susceptible, all S. aureus Oxacillin susceptible and all S. pyogenes Erytromycin susceptible. All H. influenzae isolates were susceptible to Ampicillin and all E. coli to Ciprofloxacin, all but one to Cotrimoxazole. Tetracycline resistance vice versa in S. aureus and Streptococcus spp. isolates was up to 33%.

Conclusion: Antimicrobial resistance in respiratory pathogens is extremely low due to lack of antibiotics because of isolation during civil war. Tetracycline resistance is high because Doxycycline is extremely cheap and available.

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Antibiotic Practices and Resistance in a Rural Haitian Population Isolated by Previous Civil War Conflicts

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Background: Haiti was suffering from about 40 years of focal civil war conflicts when changing the dictatorship to a democratic government until 2004 and some rural areas have been cut from supply of health care services for several years. Antibiotics for infection were used only exceptionally except of TB which was merged in specialized state supplied TB centres.

Methods: We have cultured 500 consecutive outpatient department patients from Community Health Centre in Mole St. Nicolas in north Haiti, in a rural area without road and only boat access. 139 respiratory isolates were transported by air to National Reference Laboratory of Antimicrobial Resistance in Nitra.

Results: All S. aureus isolates were Oxacillin and Rifampicin susceptible, all pneumococci were susceptible to Penicillin and 94% also to Doxycyclin. All but one of 32 Str. pyogenes were susceptible to Erytromycin.

Conclusion: The incidence of antimicrobial resistance in rural Haiti is exceptional because of limited access to pharmacy and shops or gasoline stations selling antibiotics as OTC.

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Antibiotic Practices and Policies in Slums of Nairobi and Among Economic Refugees in Turbana Area

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Background: About one third of 6 million slum population in Nairobi live without regular access to drinking water and toilets. Gastrointestinal infections (both bacterial and parasitic) and respiratory diseases due to overcrowding, pollution and malnutrition are very common. All antibiotics are OTC and available from pharmacies owned by Indian pharmacists with good education, who often supply doctor advice, because the number of doctors is very limited.

Methods: Antimicrobial resistance was surveyed regularly in 1999–2007 at Mary Immaculate Clinic in Nairobi. Swabs were transported to the reference laboratory for antimicrobial resistance in Slovak Republic at University Hospital Nitra and tested with disc diffusion method according to the NCLS standards.

Results: We discovered increasing resistance in Str. pneumoniae to Penicillin, S. aureus to Oxacillin and E. coli to Cotrimoxazole. Prevalence of HIV was 12–16% with decreasing trend and major opportunistic infection was TB, candidiasis and Salmonella/Amoeba diarrhoea.

Conclusion: Factors that contribute to unfavourable trends in antimicrobial resistance has to addressed by preventing the transmission of commonest infectious diseases and implementing proven effective rational drug use strategies (IMCI, DOTS). Unregulated drug availability, inadequate antimicrobial drug quality and surveillance must be addressed as well.

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The Role of Neutrophils in Infection (invited)

The Role of Neutrophils in Infection

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Polymorphonuclear leukocytes (PMN) represent the dominant cellular contributor to innate host response to infection, dramatically evidenced by the increased frequency and severity of infections in individuals with compromised numbers of normal PMN. In circulation, the