Volume: 1 Issue: 4

CIDS Newsletter

September 2014

CLINICAL INFECTIOUS DISEASES SOCIETY

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Design & format:
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Editor's note

Dear CIDS members

We had a fantastic CIDSCON 2014, thanks to Dr George K Varghese, Dr Purnima Parthasarathy, Dr George M Varghese and their team who worked tirelessly to ensure the smooth conduct of the conference. Very high academic and organizational standards were set, and we hope to continue the trend at CIDSCON 2015, scheduled for August 21-23, 2015 in New Delhi.

The General Body Meeting of CIDS was conducted on August 23rd. We welcome the new office bearers who will take office from April 2015: Dr George K Varghese (Vice-President), Dr Subramanian Swaminathan (Joint Secretary) and Dr George M Varghese (Treasurer). We also welcome Dr Atul K Patel to the CIDS executive committee.

The society's annual PG CME will be at Vellore on 11-13th December: encourage postgraduates from your institution and medical colleges in your area to register early. Last year's event was so popular that many registration requests were turned down. Our Secretary Dr George M Varghese may be contacted for details.

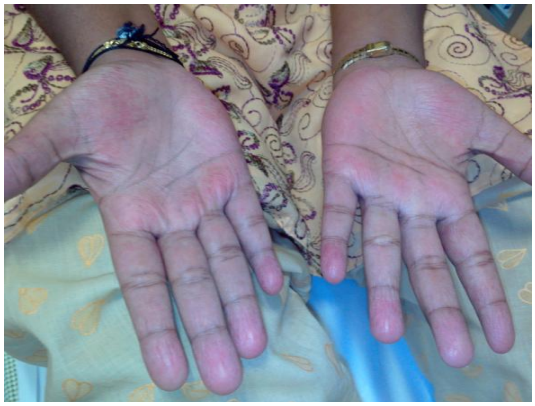
My thanks to many of our senior members, who have volunteered to contribute in their areas of special interest; this should greatly enhance the quality of our newsletter. Once again, I welcome suggestions and contributions from all of you.

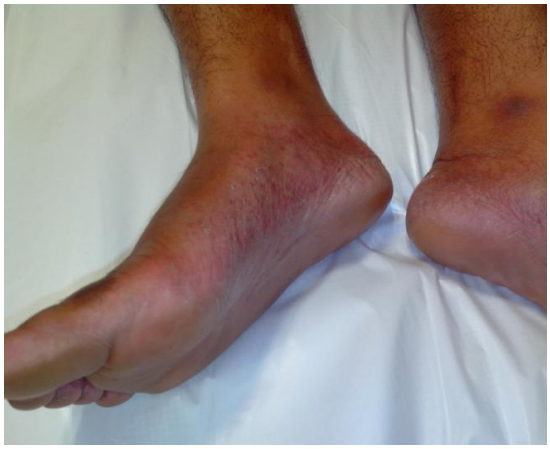
Sincerely

Dr Ram Gopalakrishnan

Photo Quiz

A 20 yrs female presented with fever, rash and swelling on hands and feet for 6 days.
What is your diagnosis?





Congratulations!

The following CIDS members have been conferred the designation of Fellow of the Infectious Diseases Society of America.

- Dr. Ram Gopalakrishnan, MD, MRCP, AB (IM), AB (ID), FIDSA
- Dr. George M. Varghese, MD, DNB, DTMH, FIDSA
- Dr. Atul K. Patel, MD, FIDSA

New Members

Dr. P Senthur Nambi	Chennai
Dr. Gagandeep Kang	Vellore
Dr. Barigala Ravikiran	Hyderabad
Dr. Justy Antony Chiramal	Bangalore
Dr. Suraj S Nambiar	Kanjangad
Dr. Shubhanker Mitra	Vellore
Dr. H Manjunatha Hande	Manipal
Dr. S. Ravindranath	Bangalore

Dr. Lakshmi Kiranmayi	Guntur
Dr. MSRL Deepika	Guntur
Dr. Patel Bharati I	Ahmedabad
Dr. Gifty Immanuel	Bangalore
Dr. Swati Gohel	Chennai
Dr. Vinay D	Chennai
Dr. Laxman G. Jessani	Chennai

News from the ID world

Government eliminates antibiotics for growth promotion in animals?

(courtesy Dr Senthur Nambi)

A new directive from the DGHS & CDSCO directs the Drug Controller of all states to stop the use of antibiotics as growth promoters in animal industry, in a letter dated 3rd June (102-74/2014-Trade). Interestingly the letter predates the study on antibiotic residues in chicken that created national headlines (see CIDS newsletter, August 2014). The letter specifically directs states to stop the use of antibiotics and hormones as growth promoters, and mandates withdrawal periods (time between last use of antibiotic and use of animal as food) as 7 days for eggs or milk, 28 days for poultry and other meat and "500 degree days"(not sure what that means?) for fish meat.

Great news: first step is to have a rule or law, next step is implementation. This will go a long way in reducing antibiotic abuse, human exposure to antibiotics in food and combating resistance. Hope this is enforced rather than just being on the books!

FDA Approves Oritavancin for Skin Infections

http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm408475.htm

The US FDA announced approval of oritavancin, a glycopeptide antibiotic for treatment of acute bacterial skin and skin-structure infections (ABSSIs) in adults. In two phase III, randomized, controlled trials totaling >1900 patients, a single dose of oritavancin was noninferior to 7 to 10 days of vancomycin.

Oritavancin is administered intravenously as one 1200-mg dose over 3 hours. It has a long terminal half-life and does not require dose adjustment for mild/moderate hepatic or renal dysfunction. It can inhibit the metabolism of warfarin and also interferes with the coagulation tests used to monitor warfarin and heparin activity. The most common adverse effects seen in the clinical trials were headache, nausea, vomiting, diarrhea, and soft-tissue abscesses.

What's new and going around

Ebola FAQs

(courtesy Dr. D Suresh Kumar)

Why is there concern?

An epidemic of the Ebola virus disease (EVD) is ongoing in West Africa. The outbreak is the most severe Ebola virus outbreak recorded in regard to the number of human cases and fatalities. The outbreak began in Guinea in December 2013 but was not detected until March 2014, after which it spread to Liberia, Sierra Leone, and Nigeria. A total of 3685 suspected cases with 1841 deaths have been reported by the World Health Organization (WHO) as of 31 August 2014. On 8 August 2014, WHO declared the outbreak a Public health emergency of international concern.

Are there any cases of Ebola reported in the India?

No. Several suspected cases from travelers tested negative.

How is Ebola transmitted?

Ebola is transmitted through direct contact with the blood or bodily fluids of an infected symptomatic person or through exposure to objects (such as needles) that have been contaminated with infected secretions. It is not transmitted by air or water (it is not air borne or food borne).

What are the signs & symptoms of Ebola?

EVD is a severe acute viral illness often characterized by the sudden onset of fever, intense weakness, muscle pain, headache, sore throat, vomiting, diarrhea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding.

Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes.

Incubation period varies from 2 to 21 days, but on average 8-10 days

How is Ebola diagnosed?

Other diseases that should be ruled out before a diagnosis of EVD can be made include: malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis and other viral haemorrhagic fevers.

Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests:

- antibody-capture enzyme-linked immunosorbent assay (ELISA)
- antigen detection tests
- serum neutralization test
- reverse transcriptase polymerase chain reaction (RT-PCR) assay
- electron microscopy
- virus isolation by cell culture.

Samples from patients are an extreme biohazard risk; testing should be conducted under maximum biological containment conditions (BSL3 or 4). Samples may be sent to National Institute of Virology, Pune & NCDC, New Delhi.

What is the treatment of Ebola?

Standard treatment for Ebola HF is still limited to supportive therapy.

This consists of:

- Balancing the patient's fluids and electrolytes
- Maintaining their oxygen status and blood pressure
- Treating them for any complicating infections

Timely treatment of Ebola HF is important but challenging since the disease is difficult to diagnose clinically in the early stages of infection. Because early symptoms such as headache and fever are nonspecific to ebolaviruses, cases of Ebola HF may be initially misdiagnosed. Experimental treatment has been tested and proven effective in animal models tried in the US. Humanized monoclonal antibodies and antiviral drugs are being tried in humans on a compassionate basis. The WHO ethical panel has approved such use.

Is there a vaccine for Ebola?

A vaccine is currently in early stage trials.

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Can one get Ebola from a person who is infected but doesn't have any symptoms?

No. Individuals who are not symptomatic are not contagious. Casual contact in public places with people that do not appear to be sick do not transmit Ebola. One cannot contract Ebola virus by handling money, groceries or swimming in a pool. Mosquitoes do not transmit the Ebola virus. Ebola virus is easily killed by soap, bleach, sunlight, or drying. Ebola virus survives only a short time on surfaces that have dried in the sun.

What should be the advice for travelers?

US CDC has issued a travel alert 3, discouraging travelers to defer unnecessary travel to Guinea, Liberia, and Sierra Leone over concerns that travelers may not have access to health care facilities and personnel should they need them in country.

When should someone seek medical care?

If a person has been in an area known to have Ebola virus disease (countries listed above as on today or in contact with a person known or suspected to have Ebola and they begin to have symptoms within 21 days of contact, they should seek medical care immediately by reporting to the nearest hospital.

When should someone seek medical care?

If a person has been in an area known to have Ebola virus disease (countries listed above as on today or in contact with a person known or suspected to have Ebola and they begin to have symptoms within 21 days of contact, they should seek medical care immediately by reporting to the nearest hospital.

Outbreak of Kyasanur Forest disease in Thirthahalli, Karnataka

(courtesy Dr R Madhumita)
International J of Infect Dis published online 24 July 2014

KFD outbreaks have been frequent in Karnataka. The most recent one included 92 confirmed cases out of 166 suspected, diagnosed with a combination of KFDV viral RNA and IgM antibodies.

Snippets from the literature

How do you manage first-line ART regimen (1 NNRTI + 2 NRTI) failure?

(courtesy Dr OC Abraham)

EARNEST Trial Team.
N Engl J Med. 2014 Jul 17;371(3):234-47.
(http://www.nejm.org/doi/pdf/10.1056/NEJMoa1311274)

SECOND-LINE Study Group.
Lancet. 2013 Jun 15;381(9883):2091-9.

The DHHS (US) Guidelines recommend that when ART regimen fails, the new regimen should contain at least two (preferably three) active drugs in the new regimen. This poses a major challenge for those of us practicing in resource-limited settings. The vast majority of patients don't have access to routine viral load monitoring or genotypic resistance testing. Therefore, by the time failure is diagnosed, patients are likely to have accumulated numerous mutations (e.g., M184 V, multiple TAMs, which can make HIV resistant all currently available NRTIs). Hence, if you are following the WHO recommendation to change to a boosted PI + 2 new NRTIs (e.g., LPV/r + TDF + 3TC for those who have been on NVP + AZT + 3TC), it is quite possible that the patient will have only one fully active agent (boosted PI) in the new regimen.

An alternative strategy is to start the patient on two new classes of drugs, e.g., boosted PI + an integrase inhibitor. These two strategies have been evaluated in two recent randomized clinical trials:

The EARNEST Trial compared a regimen of LPV/r + 2 new NRTIs (selected by the treating physician, not based on resistance testing reports) with LPV/r + raltegravir (RAL) and LPV/r monotherapy (after 12 weeks of LPV/r + RAL). The SECOND-LINE Study compared LPV/r + 2 new NRTIs with LPV/r + RAL.

Both studies showed similar results. The LPV/r + RAL regimen was "not superior" to the LPV/r + 2 new NRTIs in the EARNEST Trial after 2 years of follow up. In the SECOND-LINE Study, the LPV/r + RAL regimen was "non-inferior" to the LPV/r + 2 new NRTIs regimen after 1 year of follow up.

Efavirenz and suicide risk; lower dose the answer?

(courtesy Dr Vinay D)

Ann Intern Med 2014 Jul 1; Lancet. 2014 Apr 26

Efavirenz, the cornerstone of most anti-retroviral regimens used in India, has been associated with neuro-psychiatric side effects not just in the initial period after starting the drug, but during long term therapy as well. A new study describes an increased risk of suicide with the drug. Another randomised, double-blind, placebo-controlled, non-inferiority trial compared the efficacy of 400 mg efavirenz versus standard 600 mg dose in HIV-infected, antiretroviral-naive adults (ENCORE1) and found equivalent virologic responses but fewer side-effects.
Perhaps lower dose co-formulated efavirenz will be the way to go in future.

Timing of Antiretroviral Therapy after Diagnosis of Cryptococcal Meningitis

(courtesy Dr Vinay D)

NEJM June 26, 2014

Recommendations based on observational data support deferral of ART by at least 4 weeks in patients with cryptococcal meningitis. A prospective randomized trial has confirmed these findings. Study participants were randomly assigned to undergo either earlier ART initiation (1 to 2 weeks after diagnosis) or deferred ART initiation (5 weeks after diagnosis). Participants received amphotericin B (0.7 to 1.0 mg per kilogram of body weight per day) and fluconazole (800 mg per day) for 14 days, followed by consolidation therapy with fluconazole. The 26-week mortality with earlier ART initiation was significantly higher than with deferred ART initiation (45% vs 30%).

Tetravalent dengue vaccine modestly efficacious for children in Asia but an antiviral disappoints

(courtesy Dr Vinay D)

Lancet 2014 Jul 11. doi:10.1016/S0140-6736(14)61060-6
The Lancet Infectious Diseases, Volume 14, Issue 9, Pages 830 - 838, September 2014
The Lancet Infectious Diseases, Volume 14, Issue 8, Pages 706 - 715, August 2014

An observer-masked, randomized controlled, multicenter, phase 3 trial was carried out in five countries in the Asia-Pacific region involving healthy children aged 2—14 years. Three injections of a recombinant, live, attenuated, tetravalent dengue vaccine (CYD-TDV) or placebo given at months 0, 6, and 12. Efficacy was 56% against symptomatic, virologically confirmed dengue and 80% against dengue hemorrhagic fever. Another recombinant live attenuated tetravalent dengue vaccine (DENVax) underwent phase 1 trials in Colombia, and was found to be safe and immunogenic.

Dengue is a major problem worldwide and the hunt is on for an efficacious and safe vaccine. An antiviral drug celgosivir was generally safe and well tolerated but does not seem to reduce viral load or fever burden in a phase 1b, randomized trial in Singapore.

And a vaccine for Chikungunya too?

Lancet, Early Online Publication, 15 August 2014
The Lancet Infectious Diseases,
Volume 14, Issue 9, Pages 789 - 790, September 2014

A phase 1, dose-escalation, open-label clinical trial of a virus-like particle (VLP) chikungunya virus vaccine, VRC-CHKVLP059-00-VP, in healthy adults concluded that the vaccine was immunogenic, safe, and well tolerated.

No drugs or vaccines are available for treatment or prevention of Chikungunya virus infection, which is a common cause of fever and joint pain in India since 2006, and is now causing an epidemic in the Caribbean and North and South America. The virus may infect osteoblasts, has an inflammatory response very similar to rheumatoid arthritis and can cause severe arthritis in patients with underlying joint diseases.

Adjunctive bedaquiline effective for MDR-TB, but…

(courtesy Dr Vasant Nagvekar)
N Engl J Med 2014 Aug 21; 371:723

Bedaquiline is a diaryl-quinolone which has recently received accelerated US FDA approval for treatment of MDR-TB. This study showed that the addition of bedaquiline to a preferred background regimen improved sputum culture conversion at 120 weeks (62% vs 44%; P=0.04) and clinical cures (58% vs 32%; p=0.003) but was associated with increased mortality (13% vs. 2%; P=0.02). Perhaps QT prolongation was responsible, though this was not proven

Upcoming conferences and meetings

38th National Conference of the Indian Association of Medical Microbiologists (MICROCON 2014)

15th - 19th October 2014 at Birla Auditorium Jaipur, Rajasthan, India.
http://www.microcon2014.com

Transplant Infectious Disease Conference
6-8 November, Vellore
Contact Dr Priscilla Rupali (prisci@cmcvellore.ac.in)

7th World Workshop on Oral Health and Disease in AIDS.
6-9, Nov 2014, Hyderabad
info@ww7india.com, ww7india@gmail.com

3rd Biennial Conference of HIV Medicine Association of India (HIVMAI)
8th-9th November 2014, India International Centre, New Delhi
http://hivmai.org/hivmai/node/4052

First Conference of Fungal Infection Study Forum (FISF) and Mycology Master Class
Kolkata 14-16 Nov 2014
http://www.fisftrust.com

Antimicrobial Stewardship Course, New Delhi, (endorsed by CIDS) Nov 27-28th
Pre-conference workshop of IAMM Delhi chapter annual conference in November, conducted by BSAC (British Society of Antimicrobial Chemotherapy) GARP and Delhi Chapter of Indian Association of Medical Microbiology

CIDS Annual Postgraduate Course in Infectious Disease
11-13 December, CMC, Vellore.
Contact Dr George M Varghese
(secretary@cidsindia.org)

Answer to photo quiz

Papular purpuric gloves and stocking syndrome (PPGSS).

Parvovirus B19 IgM was positive. This is a manifestation of parvovirus B19 infection and usually resolves spontaneously. Absence of vesicles and presence of purpura distinguish the syndrome from hand, foot and mouth disease caused by enteroviruses.

(Case courtesy Dr Ravikant Porwal)