Volume: 1 Issue: 7

CIDS Newsletter

December 2014

CLINICAL INFECTIOUS DISEASES SOCIETY

Editor:
Dr Ram Gopalakrishnan

Design & format:
Dr Laxman G. Jessani

Editor's note

Dear CIDS members

August 21-23 will be the CIDSCON 2015 dates in New Delhi: please block your dates. Request you to send in your comments and suggestions for topics and speakers to us so that we continue to have an outstanding academic program.

We also request you to publicize the conference as this is the first time we will be holding the conference in North India. We truly need our society to grow in all parts of the country!

On behalf of all our members, I congratulate our Secretary Dr George M Varghese for successfully organizing the annual CME for Postgraduates for the third year in a row. The meeting was well attended, and will hopefully remain an annual feature and will attract more young physicians to our field. We hope to be able to conduct one more such annual CME in March or April so as to attract postgraduates from all over India: any volunteers for venues?

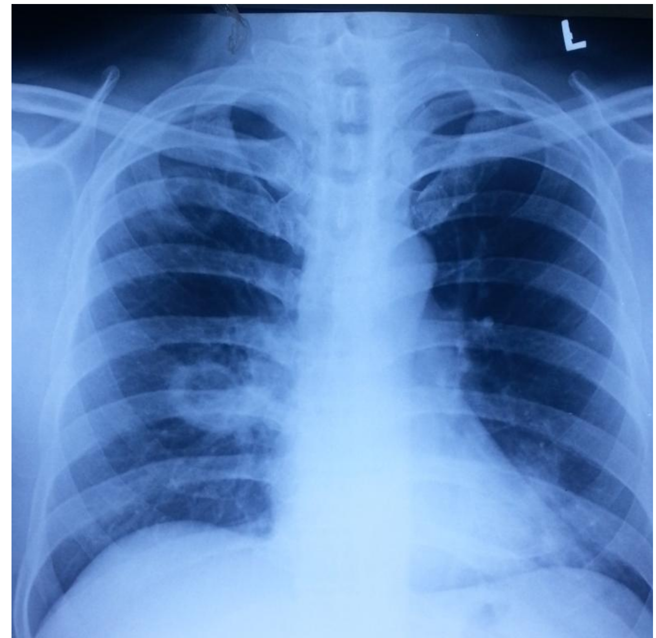
Those among you who conduct local CME programs are requested to apply for endorsement from the society: this will help both your local visibility and enable the society to grow.

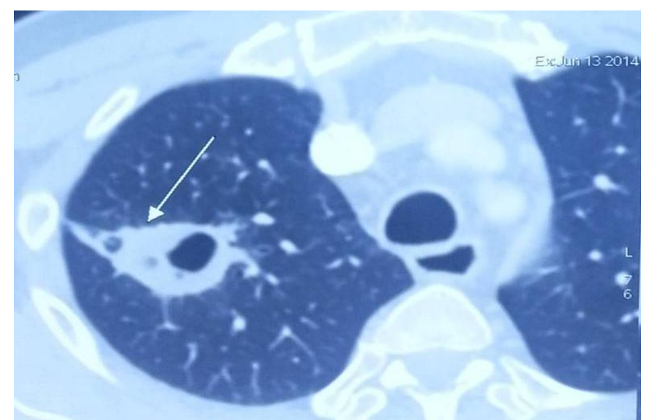
Sincerely

Ram Gopalakrishnan

Photo Quiz

A 52 year old poorly controlled diabetic presented with dry cough, low grade fever and breathlessness for 1 month. His chest Xray and CT are shown. Sputum AFB smear and GeneXpert were negative. What is your diagnosis?





What's new and going around

Ebola arrives in India

The first reported case of Ebola from India was a 26 year old male from Liberia who arrived in New Delhi after being treated for recovering from Ebola in that country. He was asymptomatic and blood samples tested negative. As his semen samples showed the virus (semen can continue to shed virus for up to 3 months), he has been quarantined at New Delhi airport. With luck the epidemic will not spread any further.

Emergence of Crimean-Congo hemorrhagic fever in Amreli District of Gujarat State, India, June to July 2013.

Int J Infect Dis 2014; 18:97–100

On 23 June 2013, a 90-year-old man from the Indian village of Karanya in the Amreli District of Gujarat State presented with fever, bloody diarrhea, and severe abdominal pain. He died 2 days later. Subsequently, 8 additional family members became ill, 1 of whom died. Another fatal case was identified hundreds of kilometers distant in the village of Undra in Patan District of Gujarat State. A large number of people had potential contact with the index patient during his illness or attended his funeral and the secondary attack rate was estimated to be 3.7%, while the primary attack rate was 0.3%.

The diagnosis of Crimean Congo hemorrhagic fever (CCHF) was confirmed in 10 subjects, including the 3 who died. All 5 tick (*Hyalomma anatolicum anatolicum*) pools collected from livestock around the village of Karanya were found to harbor CCHF viral RNA by reverse transcription polymerase chain reaction, and 43.7% of livestock had detectable serum immunoglobulin G (IgG) antibody to CCHF virus.

It seems likely that the cases of CCHF identified to date in India represent the tip of an iceberg. The disease is endemic in Pakistan, just across the border.

Nipah encephalitis: just across the border in Bangladesh

Epidemiol Infect. 2014: 1-9

This study published demonstrates the utility of integrated cluster surveillances to detect Nipah virus encephalitis. The authors tested serum using Nipah-specific IgM ELISA. Up to September 2011, in 5887 listed cases, they identified 62 clusters comprising 176 encephalitis cases. They collected blood from 127 of these cases. In 10 clusters, they identified a total of 62 Nipah cases: 18 laboratory-confirmed and 34 probable. They identified person-to-person transmission of Nipah virus in 4 clusters. From case-based surveillance, they identified 23 (4 percent) Nipah cases.

Since 2001, outbreaks of Nipah virus encephalitis have been identified nearly every year in Bangladesh and an 87 percent case fatality rate was reported between 2001 and 2007. January through March is the Nipah season in Bangladesh: drinking raw date palm sap contaminated with saliva or urine from bats infected (carriers) with Nipah virus is the primary mode of transmission.

Malaria numbers in India: only 7% being reported

www.who.org

India recorded 881,000 cases of malaria, but the WHO estimates that as many as 12.8 crore cases occur annually. Just like dengue it appears that there is substantial under reporting and perhaps empiric treatment in India.

And polio in Pakistan

http://www.promedmail.org

In yet another major blow to the failing polio eradication programme in Pakistan, 6 new polio cases were confirmed during a single day on Saturday [6 Dec 2014], taking the total number of annual cases to a record 276.

Despite numerous efforts put in to curb the spread of poliovirus during the last 5 years in all provinces, the programme is now well on its way to crossing the record high of 300 cases.

Snippets from the literature

Efficacy of a tetravalent dengue vaccine in children in Latin America

NEJM DOI: 10.1056/NEJMoa1411037

This recombinant, live, attenuated, tetravalent dengue vaccine (CYD-TDV) or placebo was administered at months 0, 6, and 12 under blinded conditions. Vaccine efficacy was 60.8% overall, 80.3% against hospitalization for dengue and 95% against severe dengue.

These numbers were quite similar to an earlier study using the same vaccine from Asia. Hopefully a vaccine will be licensed and become available soon.

HIV and visceral leishmaniasis co-infection in Bihar

Clin Infect Dis 2014 59 (4):552-555.

Consecutive HIV screening of 2077 patients aged ≥14 years with confirmed visceral leishmaniasis in Bihar, found that 5.6% were HIV positive, including 2.4% with newly diagnosed HIV infection.

India has taken significant steps to combat VL, committing to move toward elimination in the region. While the findings reported do not provide an estimate of the actual burden of VL–HIV coinfection in India at large, they clearly suggest a wake-up call to tackle VL–HIV co-infection.

Metronidazole for mothers-in-law with CDI, with vancomycin preferred for mothers?

Clin Infect Dis. Vol. 3. 2014. p. 345-54

Results from two multinational, randomized, controlled trials comparing vancomycin, metronidazole, or tolevamer (toxin binding compound) for *Clostridium difficile* infection showed that tolevamer was inferior but also showed superiority of vancomycin over metronidazole. Metronidazole was inferior to vancomycin in achieving clinical success (202/278, 72.7% and 210/259, 81.1%; P = .02) for all patients. Clinical success occurred in 4%, 8.3%, and 12.2% more patients treated with vancomycin compared with metronidazole who had mild (P = .54), moderate (P = .14), and severe (P = .059) CDI, respectively.

A long standing mantra has been that both are equivalent for mild-moderate disease, and vancomycin is superior for severe disease. These latest results should perhaps load the dice more in favor of vancomycin.

Molecular diagnostic tests for 15 enteropathogens causing childhood diarrhoea: a multicentre study

The Lancet Infectious Diseases, Volume 14, Issue 8, Pages 716 - 724, August 2014

Investigators developed and assessed molecular diagnostic tests for 15 enteropathogens (ten bacterial pathogens, five viruses, and *Giardia* spp) across three platforms—PCR-Luminex, multiplex real-time PCR, and TaqMan array card—at five laboratories in Nepal, Pakistan, Bangladesh, Tanzania, and the Gambia. They judged the analytical and clinical performance of these molecular techniques against comparator methods (bacterial culture, ELISA, and PCR) using 867 diarrhoeal and 619 non-diarrhoeal stool specimens. The authors reported that all the molecular testing platforms and targets had good analytical specificity (on average, ≥95% for every platform) and were more sensitive than comparator methods (the sensitivity of comparator methods against the molecular platforms ranged from 20% to 85%).

The authors conclude that molecular diagnostic tests can be implemented successfully and with fidelity across laboratories around the world. Perhaps they will replace stool bacterial cultures in the future.

Emtricitabine or lamivudine as first line?

Clin Infect Dis. 2014.doi:10.1093/cid/ciu763

An analysis from Rokx et al and the AIDS Therapy Evaluation in the Netherlands nationwide HIV cohort (ATHENA) HIV treatment cohort in the Netherlands suggests better virological responses to emtricitabine compared with lamivudine as part of first-line ART. The authors of this nonrandomized cohort study conclude that using lamivudine instead of emtricitabine may result in additional morbidity and costs associated with virological failure and the development of drug resistance.

To date, 3 randomized clinical trials (n = 1242) have directly compared lamivudine and emtricitabine; the pooled results of these trials found no difference in terms of virological suppression or virological failure. In comparison, the risk of virological failure in the ATHENA cohort was three times higher for patients receiving lamivudine compared with efavirenz (RR, 2.99; 95% CI, 2.08–4.30).

WHO guidelines recommend a first-line regimen comprising tenofovir, efavirenz, and either lamivudine or emtricitabine, preferably as fixed-dose combinations.

Xpert MTB/RIF assay shortens airborne isolation for hospitalized patients with presumptive tuberculosis

Clin Infect Dis. (2014) 59 (2):186-192.

Current practice calls for presumptive isolation of all patients suspected to have TB, till sputum AFB smears are negative. Can Xpert replace smears?

Among 207 subjects, the median isolation duration was 68.0 hours for smear microscopy compared with 20.8 hours for the 1-specimen Xpert, 41.2 hours for the 2-specimen Xpert, and 54.0 hours for the 3-specimen Xpert strategies ($P \leq .004$). The 2- and 3-specimen Xpert and smear microscopy strategies captured all 6 tuberculosis cases. The 1-specimen Xpert strategy missed 1 case.

Perhaps a 2 specimen Xpert can be used in place of smears for purposes of discontinuing isolation.

Guideline watch

IDSA Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update

Clin Infect Dis 2014 59: 147-159 and e10-e52

Upcoming conferences and meetings

Infectious Diseases CME, Manipal (endorsed by CIDS)

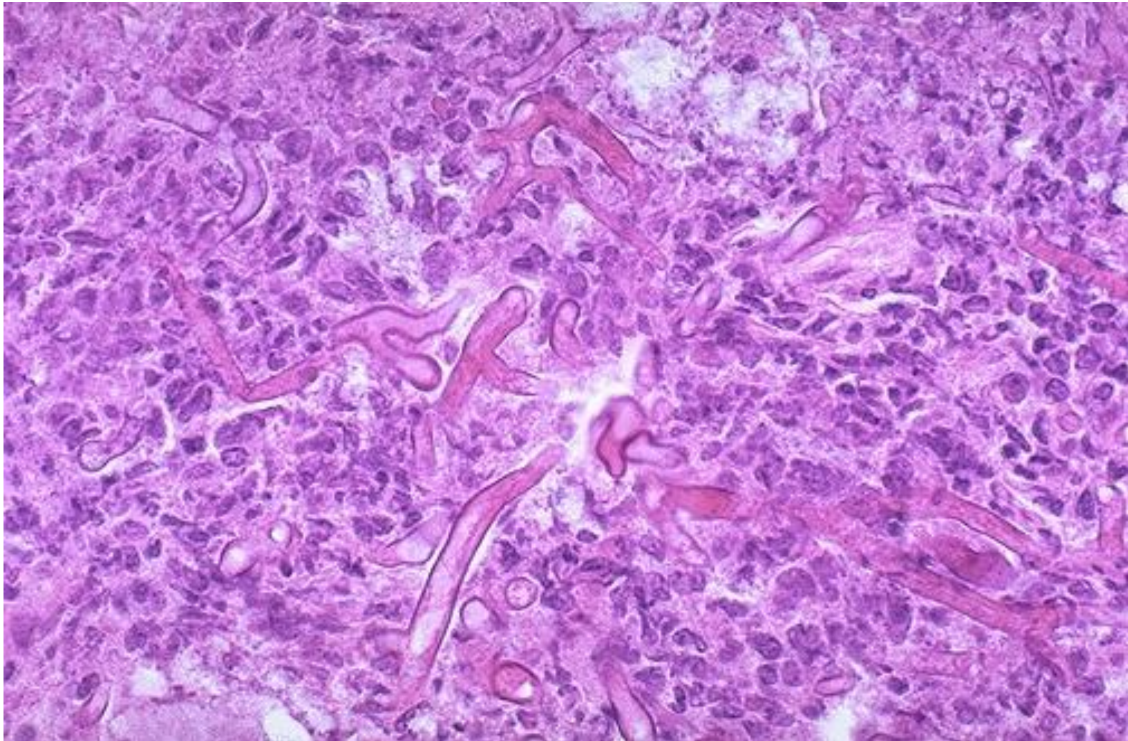
21st Dec, 2015. Contact Dr Kavitha Saravu: kavithasaravu@gmail.com

5th National Conference on HIV/AIDS Therapy: Current Practices & Future Options

10th & 11th January, 2015, Mumbai (http://www.hhrfonline.com/Brochure/eBrochure6.pdf)

Answer to photo quiz

Pulmonary mucormycosis. Histopathology showed aseptate broad hyphae and culture grew Mucor species.



Mucormycosis is common in India, perhaps due to the high prevalence of diabetes and pulmonary presentations in diabetic hosts are increasingly being reported.
(case courtesy Dr A Murali)