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CIDS Newsletter

June 2014

CLINICAL INFECTIOUS DISEASES SOCIETY

Editor:
Dr Ram Gopalakrishnan

Design and format:
Dr Laxman G. Jessani

Editor's note

Dear CIDS members

We are happy to circulate the long awaited first edition of the CIDS newsletter!

We request news and contributions from members in the following areas relevant to Infectious Disease in India:

-important ID literature in medical journals

-news reports

-reports on outbreaks, disease trends, resistance patterns etc

-meetings and conferences related to ID

-photo quiz or interesting cases

-any other item of interest to Infectious Disease clinicians in India

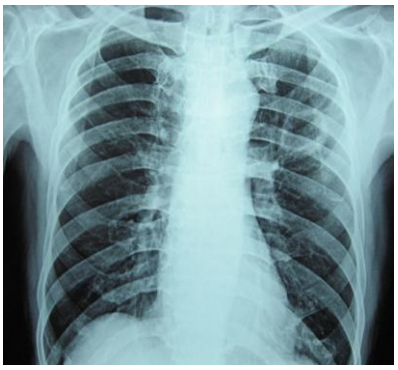
Please give us your feedback and suggestions for future issues to me at gopalmeena_2000@yahoo.com or to the CIDS office at secretary@cidsindia.org

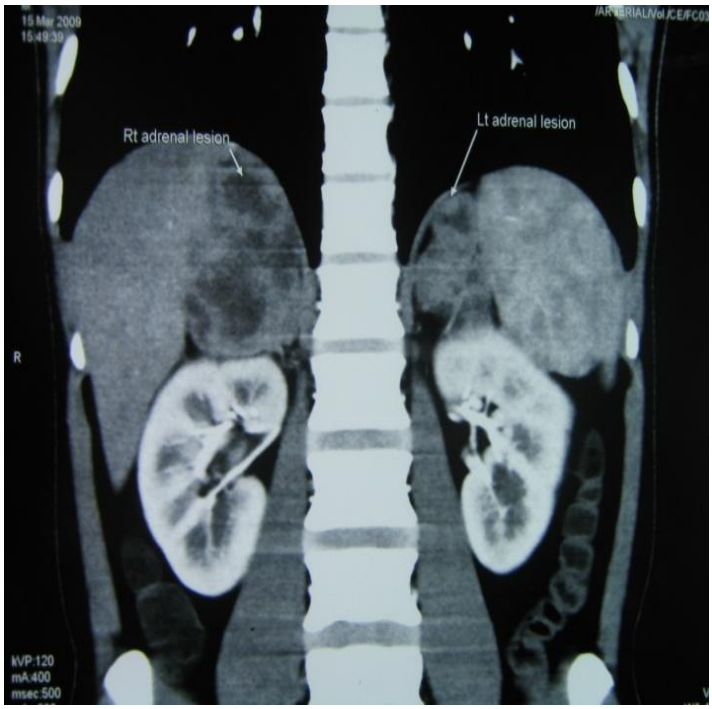
Hope all of you have registered for CIDSCON 2014, our society's annual conference in Bengaluru from Aug 22-24. Note that abstract submission deadline is July 15th. Please publicize and encourage registrations for what has developed into India's premier conference in Infectious Diseases!

Dr Ram Gopalakrishnan

Photo Quiz

A 49/m presented from Assam presented with fever for 2 months, weight loss and loss of appetite. His CXR and CT are shown. What is your diagnosis?



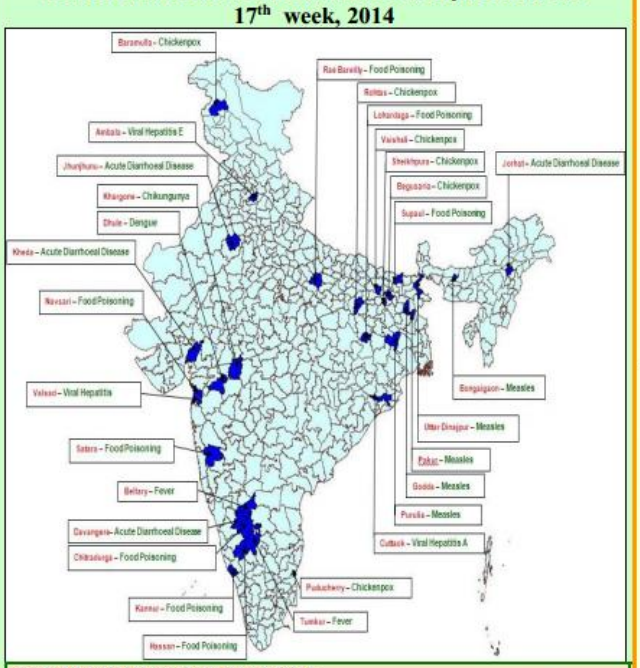


What's new and going around

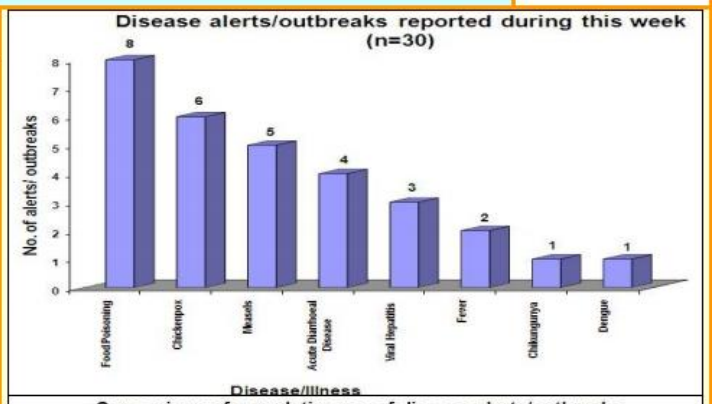
Disease outbreaks reported (provided by Dr Vinay D)

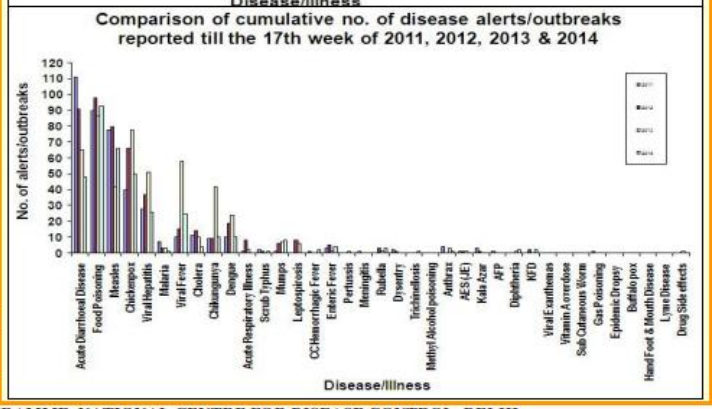
DISEASE ALERTS/OUTBREAKS REPORTED AND RESPONDED TO BY STATES/UTs THROUGH INTEGRATED DISEASE SURVEILLANCE PROGRAMME (IDSP)
17th week (21st to 27th April) 2014

District wise disease alerts/outbreaks reported in the 17th week, 2014



REPORTING STATUS OF STATES/UTs	
No. of States /UTs submitted outbreak report (including NIL report)	35
No. of States/ UTs submitted "NIL" outbreak report	20





INTEGRATED DISEASE SURVEILLANCE PROGRAMME, NATIONAL CENTRE FOR DISEASE CONTROL, DELHI
Tel No. 23913148, Fax No. 23922677; www.idsp.nic.in

MERS coronavirus

CDC website

N Engl J Med June 4, 2014 DOI: 10.1056/NEJMoa1401505

The MERS coronavirus outbreak continues in the Middle East, and the first cases in the USA have been reported. Test for MERS-CoV in patients with fever and pneumonia/ARDS with:

Travel in the past 14 days from countries in or near the Arabian Peninsula.

Close contact with an ill traveler who has fever and acute respiratory illness with the same travel history as above.

Close contact with a confirmed or probable MERS case ill at the time of contact.

Clusters of severe pneumonia of unknown etiology can be considered for testing by real time PCR for MERS-CoV in conjunction with state health department consultation. Samples can be sent to National Institute of Virology, Pune for confirmation. No cases have been reported in India yet. Patients with known or suspected infection with MERS-CoV should have combined standard, contact and airborne precautions. Gowns, gloves, face shield or goggles for eye protection and N-95 or greater respirator or equivalent level of protection should be worn while caring for the patient.

A case of dromedary camel-human transmission has also been documented in a patient who had close contact with camels who had rhinorrhea.

Don't sniff camels if you go to the Middle East!

KFD in Kerala and Karnataka

Times of India 3rd June

http://timesofindia.indiatimes.com/home/environment/flora-fauna/Department-plans-vaccination-against-Kyasanur-Forest-Disease/articleshow/32218393.cms

Reports of Kyasanur Forest Disease, a hemorrhagic fever caused by an arbovirus, have surfaced in Nilambur, Kerala (monkeys only, no humans so far) and a suspected human case of KFD has been reported at Beluvai in Moodbidri, Dakshina Kannada district in Karnataka. The District Health and Family Welfare department has sent a proposal to the government seeking approval to administer vaccine against Kyasanur Forest Disease in identified areas in Dakshina Kannada district.

Be careful of ticks if you plan to travel into these areas!

A Farmer Dies of Anthrax in Vellore, Tamil Nadu

(provided by Dr George M Varghese)

The Hindu: June 5, 2014

A farmer died of confirmed anthrax at the Christian Medical College Hospital, Vellore after admission for grave sickness brought on by the consumption of the meat of a sick goat. The disease was confirmed using culture and PCR after the man was admitted with gastrointestinal symptoms. Intensified anti-anthrax immunization measures have been instituted by the department of Animal Husbandry in Tamil Nadu and increased public awareness has been done effectively to prevent such occurrences.

Meningococcal outbreak in Vellore

(provided by Dr George M Varghese)

Christian Medical College has confirmed two cases of meningococcal meningitis in children, both from the slum area of Vellore. After confirming the meningococcus as group C, the children were treated successfully. Preventive measures including chemoprophylaxis have been instituted by CMC and Public Health authorities.

Anthrax in Odisha

(provided by Dr Vinay D)

http://www.newindianexpress.com/states/odisha/Three-Die-of-Anthrax/2014/05/28/article2249686.ece

In Koraput district, Odisha 3 persons died and 18 others were affected by the disease at Jangaljadi village under Boipariguda block in the last 7 days. Preliminary reports indicated that they had consumed contaminated beef. Anthrax has periodically cropped up in this state, due to eating infected buffalos.

TB watch

(provided by Dr A Murali)

(*WHO/RNTCP websites*)

WHO estimated burden of tuberculosis in India, 2012

TB burden	Number (Millions) (95% CI)	Rate Per 100,000 Persons (95% CI)
Incidence	2.2 (2.0–2.4)	176 (159–193)
Prevalence	2.8 (1.9–3.9)	230 (155–319)
Mortality	0.27 (0.17–0.39)	22 (14–32)

TB burden	Number (Millions) (95% CI)	Percent (95% CI)
HIV among estimated incident TB patients	0.13 (0.12–0.14)	5.6 (5.4-6.2)
MDR-TB among notified pulmonary TB patients	0.064 (0.049–0.079)	
MDR-TB among notified New pulmonary TB patients	0.021 (0.018–0.025)	2.2% (1.9–2.6%)
MDR-TB among notified Re-treatment pulmonary TB patients	0.043 (0.033–0.054)	15% (11–19%)

WHO India specific guidelines updated this year recommend CB-NAAT (cartridge-based nucleic-acid amplification test) eg Xpert MTB as the preferred first diagnostic test in children and PLHIV. The test has also been endorsed for extra-pulmonary TB, especially TB meningitis. All new patients should receive an internationally accepted first-line treatment regimen for new patients. The initial phase should consist of two months of Isoniazid (H), Rifampicin (R), Pyrazinamide (Z), and Ethambutol (E). The continuation phase should consist of three drugs (Isoniazid, Rifampicin and Ethambutol) given for at least four months (a change from previous guidelines).

Snippets from the literature

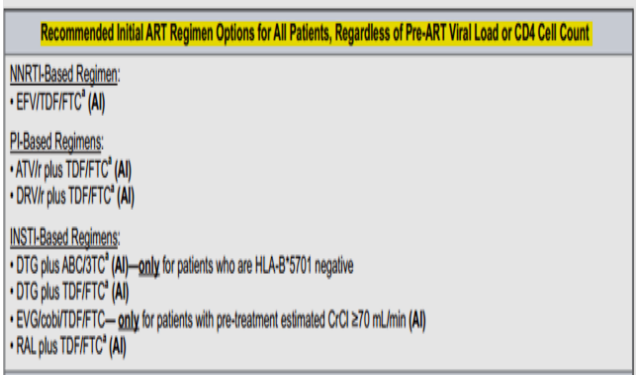
US DHHS guidelines updated May 1, 2014

http://aidsinfo.nih.gov/contentfiles/lvguidelines/adultandadolescentgl.pdf

Recent changes include:

For patients on ART for >2 years with consistent viral suppression, CD4-count monitoring should occur every 12 months (at counts 300–500 cells/mm^3) or be considered optional (at counts >500 cells/mm^3).

Over and above the previously listed seven "preferred" initial ART regimens, three new options have been added for patients with pretreatment HIV RNA <100,000 copies/mL, with caveats about checking HLA-B*5701 (regimens with abacavir) or use only in patients with CD4 counts >200 cells/mm^3 (regimens with rilpivirine). This larger list, relabeled as "recommended" regimens, now includes efavirenz + abacavir/3TC, rilpivirine/tenofovir/FTC, and ritonavir-boosted atazanavir + abacavir/3TC



Recommended Initial ART Regimen Options for All Patients, Regardless of Pre-ART Viral Load or CD4 Cell Count

NNRTI-Based Regimen:
- EFV/TDF/FTC[a] (AI)

PI-Based Regimens:
- ATV/r plus TDF/FTC[a] (AI)
- DRV/r plus TDF/FTC[a] (AI)

INSTI-Based Regimens:
- DTG plus ABC/3TC[a] (AI)—only for patients who are HLA-B*5701 negative
- DTG plus TDF/FTC[a] (AI)
- EVG/cobi/TDF/FTC— only for patients with pre-treatment estimated CrCl ≥70 mL/min (AI)
- RAL plus TDF/FTC[a] (AI)

India made cholera vaccine effective

N Engl J Med 2014 May 29;370:2111.
http://dx.doi.org/10.1056/NEJMoa1312680

A study during an outbreak of cholera from Guinea found that two doses of a WHO approved oral cholera vaccine Shanchol (Shantha Biotechnics Limited) was 86.6% effective in preventing disease. The study expands the options for worldwide control of cholera, but it is still unclear what the best use of cholera vaccines should be: in outbreaks, in areas of endemicity, in mass congregations such as refugee camps or for travelers. There is currently no WHO recommendation for use of cholera vaccines for any of the above situations.

ART only after ATT completion if CD4>220?

The Lancet Infectious Diseases, Early Online Publication, 6 May 2014 doi:10.1016/S1473-3099(14)70733-9

When to initiate anti-retroviral therapy in HIV positive patients with TB was a topic of much controversy till a series of randomized trials were published in 2011. These trials led to guidelines recommending that patients with CD4 counts <50 begin ART within 2 weeks, and others with higher counts within 2 months. WHO advocates ART for all patients with TB.

A randomized trial in Africa compared starting ART within 2 weeks of ATT commencement to starting after 6 months, stratified by CD4 count of 220-350 or >350. The primary endpoint was a composite of failure of tuberculosis treatment, tuberculosis recurrence, and death within 12 months of starting tuberculosis treatment in the modified intention-to-treat population. Secondary endpoints included mortality. Of patients with a CD4 cell count of 220—349 cells per μL, 26 (7·9%) of 331 patients versus 33 (9·6%) of 342 reached the primary endpoint (RR 0·80, 95% CI 0·46—1·39; p=0·6). For those with 350 cells per μL or more, 39 (8·9%) of 436 versus 38 (8·9%) of 429 reached the primary endpoint (RR 1·01, 95% CI 0·63—1·62; p=0·4). Mortality did not differ significantly between treatment groups.

The study concluded that ART can be delayed until after completion of 6 months of tuberculosis treatment for HIV-positive patients with tuberculosis who have CD4 cell counts greater than 220 cells per μL, and that WHO guidelines should be updated accordingly.

Beginning of the end for linezolid?

(provided by Dr Laxman Jessani)

Indian J Med Res 139, March 2014, pp 463-467

This paper from Mysore, Karnataka studied an isolate of *Staphylococcus haemolyticus* from a soft tissue infection. The isolate possessed multiple mechanisms coding for linezolid resistance: the cfr gene, mutations in 25s rRNA gene and mutations in the L3 ribosomal protein. The isolate showed elevated MIC values (>256 µg ml-1) to linezolid, clindamycin, chloramphenicol and oxacillin.

Linezolid is widely used and abused in India as the cost is low compared to the west. Widespread resistance in Staphylococci may well be present but this issue is not well studied. Judicious use of linezolid in clinical practice and proper surveillance of cfr-positive strains are of utmost importance to safeguard the efficacy of linezolid.

Two new gram positive treatment options

N Engl J Med 2014 *Jun 5; 370:2169.*

(http://dx.doi.org/10.1056/NEJMoa1310480)

A panel of advisers to the US FDA gave favorable reviews to tedizolid and dalbavancin. The drugs are designed to treat serious acute bacterial skin and skin structure infections caused by gram-positive organisms, including MRSA. Tedizolid would be given once daily either intravenously or orally. Dalbavancin would be given in 2 doses, the first on day 1 and the second on day 8.

A third agent oritavancin which also has a long half life is expected to come up for FDA approval soon.

However the gram negative pipeline remains empty!

WHO reviews on tropical viral infections in India published

(provided by Dr Sheela Nagusah)

(http://www.searo.who.int/publications/journals/seajph/issues/whoseajphv3n1/en/)

Current status of dengue and chikungunya in India:

Based on the data of National Vector Borne Disease Control Programme (NVBDCP), the number of cases reported in 2013 was about 74 454 for dengue with 167 deaths and 18 633for chikungunya.

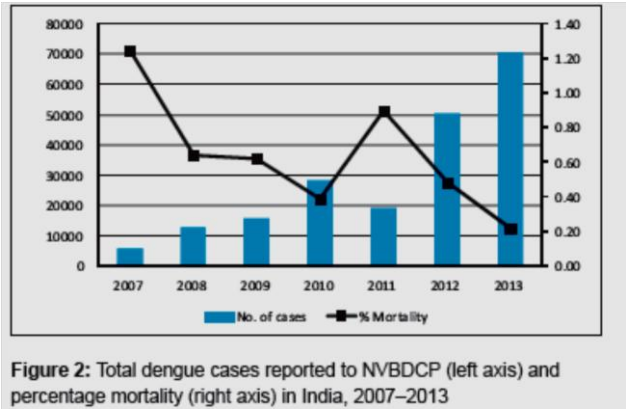


Figure 2: Total dengue cases reported to NVBDCP (left axis) and percentage mortality (right axis) in India, 2007–2013

Highly infectious tick-borne viral diseases: Kyasanur forest disease and Crimean–Congo haemorrhagic fever in India

During 2012–2013, cases of KFD were reported from previously unaffected areas in Karnataka, and newer areas of Kerala and Tamil Nadu states. In 2013, a non-nosocomial CCHF outbreak in Amreli district, as well as positive tick, animal and human samples in various areas of Gujarat state, suggested that the virus is widespread in Gujarat.

Table 2: Clinical phases of Kyasanur forest disease virus and Crimean-Congo hemorrhagic fever virus infection and tests used for diagnosis.

Disease	Phase of illness	Post onset days	Diagnostic test	Disease signs and Symptoms	Hematologic changes	Case fatality
KFD	Acute phase	2–7 days	IgM ELISA, Virus isolation (In vitro and In vivo), RT-PCR and Real-Time RT-PCR	Fever, cephalalgia, myalgia, diarrhea, cough, hepatomegaly, splenomegaly, epistaxis, bradycardia, oral and intestinal hemorrhage, meningoencephalitis	Leukopenia, thrombocytopenia, neutropenia, eosinopenia, elevated liver enzymes	2–10%
	Convalescent phase	8–12 days	IgM ELISA			
CCHF	Acute phase	1–7 days	RT-PCR and Real-Time RT-PCR (1 to 10 days), IgM ELISA (4 days-4 months), Virus isolation (*In vitro*): 1 to 7 days	Fever, myalgia, arthralgia, dizziness, malaise, mucosal hemorrhage, hemorrhagic rash, multi-organ failure, disseminated intravascular coagulopathy	Leukocytopenia, thrombocytopenia, increase clotting times, increased pro-inflammatory cytokines/ chemokines, elevated liver enzymes	3–60%
	Convalescent phase	7–12 days months can extend up to 4 month	IgM ELISA, IgG ELISA (7 days onwards)			

News from the ID world

Polio travel advisory

(provided by Dr Vinay D, Dr Senthur Nambi, Dr A Murali)

In order to maintain this polio free status achieved by the untiring efforts of 25 lakh workers and to minimize the risk of importation of polio virus in India, the Government of India has issued an advisory. It is mandatory for travellers to and from the seven polio endemic countries namely PAKISTAN, AFGHANISTAN, NIGERIA, SOMALIA, KENYA, SYRIA AND ETHIOPIA to receive a dose of polio vaccine (two drops orally) irrespective of age, sex and previous immunization status, at least four weeks before the travel. Only Government authorized centers can give the vaccine. Each traveller should carry a certificate duly signed by a designated officer. Such certification will be valid for a period of one year from date of certification.

Residents of these countries are also required to take oral polio vaccine 4 weeks before arrival in India, and to submit proof of vaccination at time of visa application.

Roche going back to antibiotic research?

The Hindu 3rd June

After years of pulling out and scaling back on antibiotic research Roche, a big pharmaceutical company, is apparently planning to get back in this area again. Recent US legislative initiatives that remove obstacles in place for antibiotic development may pave the way for more such initiatives from pharma. Let us hope the trend continues.

New Members

We welcome the following new members:

Dr A Rajalakshmi	KIMS	Trivandrum
Dr Amit Garg	LLRM Med Col	Meerut
Dr Balavinodh	PSGIMSR	Coimbatore
Dr Surabhi Madan	CIMS	Ahmedabad
Dr Bhavana M. V	Manipal Hospital	Bangalore
Dr A Murali	PSG Hospital	Coimbatore

Upcoming conferences and meetings

Infection Prevention-an update
2nd-3rd August, Hyderabad.
Contact Dr Ranganathan Iyer
(ranganathaniyer@yahoo.com)

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

15th - 19th October 2014 Jaipur, Rajasthan

http://www.microcon2014.com

First Conference of Fungal Infection Study Forum (FISF) and Mycology Master Class

Kolkata 14-16 Nov 2014

http://www.fisftrust.com

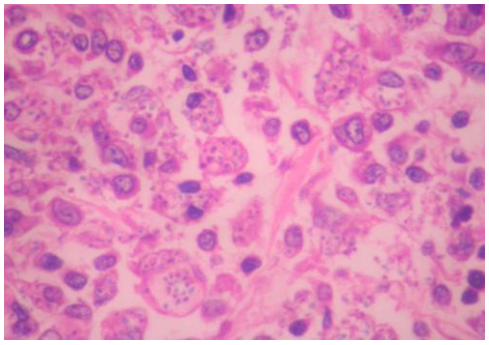
Antimicrobial Stewardship Course

27-28th Nov, New Delhi

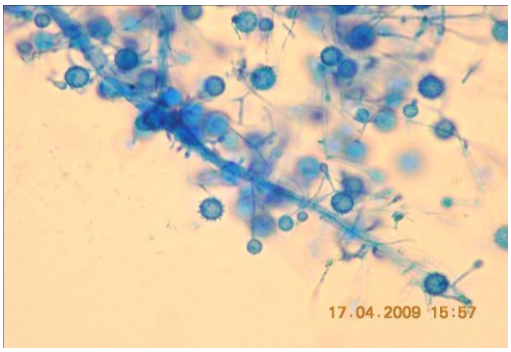
Pre-conference workshop of IAMM Delhi chapter annual conference, co-sponsored by BSAC (British Society of Antimicrobial Chemotherapy and GARP.

Answer to photo quiz

Disseminated histoplasmosis with pulmonary cavity and adrenal lesions



Adrenal gland biopsy showing intracellular yeast forms of Histoplasma capsulatum.



Culture of adrenal biopsy showing growth of mycelia form of Histoplasma capsulatum