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CIDS Newsletter

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CLINICAL INFECTIOUS DISEASES SOCIETY

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Editor's note

Dear CIDS members

I forward a message from our President, Dr Shyam Sundar to all our members:

"Dear Colleagues,

Please accept my greetings from Varanasi. Our Society enters the fifth year of its existence and we have had four very successful annual conferences. The annual conferences of CIDS can boast of being different from others in having academic purity and high standards of proceedings. CIDS aspires to be the torch bearer in clinical research in Infectious Diseases, and has a unique blend of ID specialists from different spheres of the specialty of Infectious Diseases. I request your kind support to enlist more members so that the Society can reach a wider audience. We are still in our infancy, and there are likely to be some hiccups; however I firmly believe that with your co-operation we will be able to take the Society to greater heights.

I look forward to welcoming all of you in New Delhi at CIDSCON 2015."

Preparations for CIDSCON are in full swing under the new CIDSCON organizing team, and I once again request all of you to publicize the conference, especially in the North where it is being held for the first time.

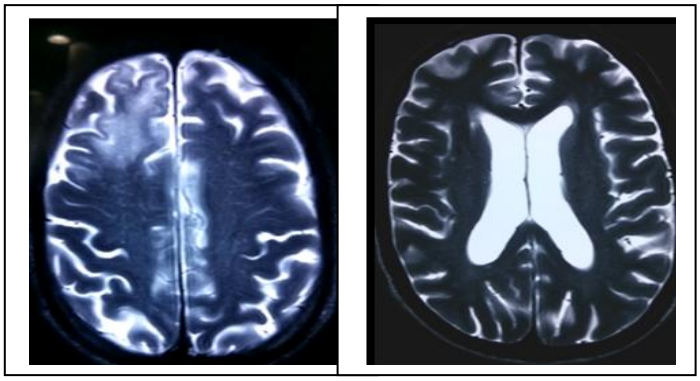
Sincerely

Ram Gopalakrishnan

Photo quiz

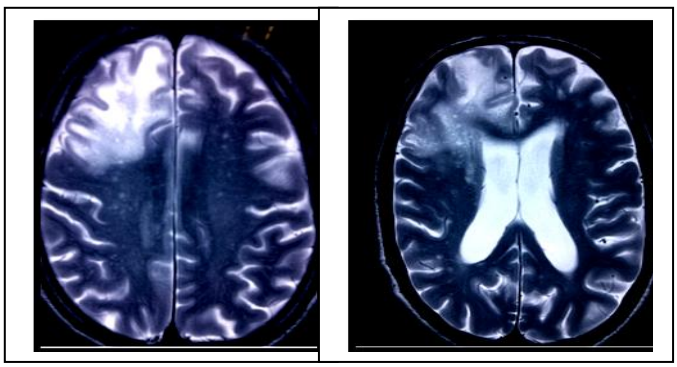
A 65 yr male, HIV+ve since 2011 (not on ART), presented with fever for 3 weeks; intermittent memory disturbances, confusion, irrelevant speech and left hemiparesis for 15 days. His CD4 count was 291 cells/cmm (7%) and HIV-1 viral load was 9,91,000 copies/ml. CECT abdomen and chest revealed multiple enlarged lymph nodes thought to be due to tuberculosis. MRI brain is shown below (Images 1 & 2).

BEFORE ART (Images 1 & 2)



CSF showed lymphocytic pleocytosis with negative AFB stain, Gram stain, GenExpert MTB and culture. The patient was started on ATT and ART was started 3 weeks later. Three weeks after starting ART, the patient had increased drowsiness and neurological deficits. MRI brain is shown (Images 3 & 4).

AFTER ART (Images 3 & 4)



What is your diagnosis and the complication?

News from the ID world

Sofosbuvir, the first direct acting antiviral for HCV (DAA), arrives in India

Several Indian pharmaceutical companies have launched generic versions of sofosbuvir, with a three month supply costing approximately Rs 54,000. The drug is optimally used in combination with pegylated interferon and ribavirin for genotype 1 HCV infection, and with ribavirin for genotypes 2 and 3. Even interferon free regimens of sofosbuvir and ribavirin for 24 weeks have shown efficacy rates for genotype 1 of 85% (see below). Patients with HIV co-infection are also expected to benefit as the drug has minimal interactions with ART, and sofosbuvir is the first DAA approved for HIV-HCV co-infection (see below for the PHOTON-2 trial).

Hepatitis C treatment is all set to change in India and ID physicians, who already take care of HIV infected patients, are well advised to keep ourselves updated and increasingly participate in the care of HCV infected patients.

Ceftazidime-avibactam approved by US FDA

The drug combines the anti-Pseudomonal activity of ceftazidime with a new beta-lactamase inhibitor avibactam, which renders it active versus ESBLs and serine beta-lactamases, including carbapenemases such as KPC-2. The most common side effects include vomiting, nausea, constipation and anxiety. The drug is approved for complicated intra-abdominal infections (cIAI), in combination with metronidazole, and complicated urinary tract infections (cUTI) based upon results from two phase 2 trials.

Indian clinicians may derive limited benefit from this drug, which has no activity against metallo-beta-lactamases such as NDM-1, the commonest carbapenemase in India.

Whats new and going around

Case report of autochthonously acquired blastomycosis in India

Am J Trop Med Hyg. 2014 Apr;90(4):735-9

This diabetic from Arunachal Pradesh without a travel history outside India presented with adrenal involvement and hepato-splenomegaly. Yeast cells were seen on examination of a needle biopsy of an adrenal gland, and cultures grew *Blastomyces dermatitidis*, with confirmation of the organism's identity by 18S ribosomal RNA amplification and subsequent sequencing. He responded favorably to treatment with itraconazole.

Snippets from the literature

Sofosbuvir plus ribavirin for treatment of hepatitis C virus in patients co-infected with HIV (PHOTON-2)

Lancet. 2015; (published online Feb 4.)

http://dx.doi.org/10.1016/S0140-6736(14)62483-1.

This study enrolled patients (aged ≥18 years) co-infected with stable HIV and chronic HCV genotypes 1–4, including those with compensated cirrhosis. Once-daily sofosbuvir (400 mg) plus twice-daily ribavirin (1000 mg in patients with bodyweights <75 kg and 1200 mg in those with weights ≥75 kg) was given for 24 weeks to all patients except treatment-naive patients with genotype-2 HCV, who received a 12-week regimen. The primary efficacy endpoint was sustained virological response 12 weeks after treatment was attained in 85% (95% CI 77–91) in patients with genotype-1 HCV, 88% (69–98) in patients with genotype-2 HCV, 89% (81–94) in patients with genotype-3 HCV, and 84% (66–95) in patients with genotype-4 HCV. There was no emergence of sofosbuvir-resistance mutations in patients with HCV viral relapse.
This regimen is now available for our co-infected patients in India.

Quality of tuberculosis care in India: a systematic review

http://www.ingentaconnect.com/content/iuatld/ijtld/pre-prints/content-ijtld.15.0186a

Of the 47 studies included, 35 were questionnaire surveys and 12 used chart abstraction. None assessed actual practice using standardised patients. Heterogeneity in the findings precluded meta-analysis. Of 22 studies evaluating provider knowledge about using sputum smears for diagnosis, 10 found that less than half of providers had correct knowledge; 3 of 4 studies assessing self-reported practices by providers found that less than a quarter reported ordering smears for patients with chest symptoms. In 11 of 14 studies that assessed treatment, less than one third of providers knew the standard regimen for drug-susceptible TB.
We have a long way to go to achieve optimal TB care.

Vitamin D does not help TB patients: an RCT

Lancet Infect Dis 2015; 14(5):528

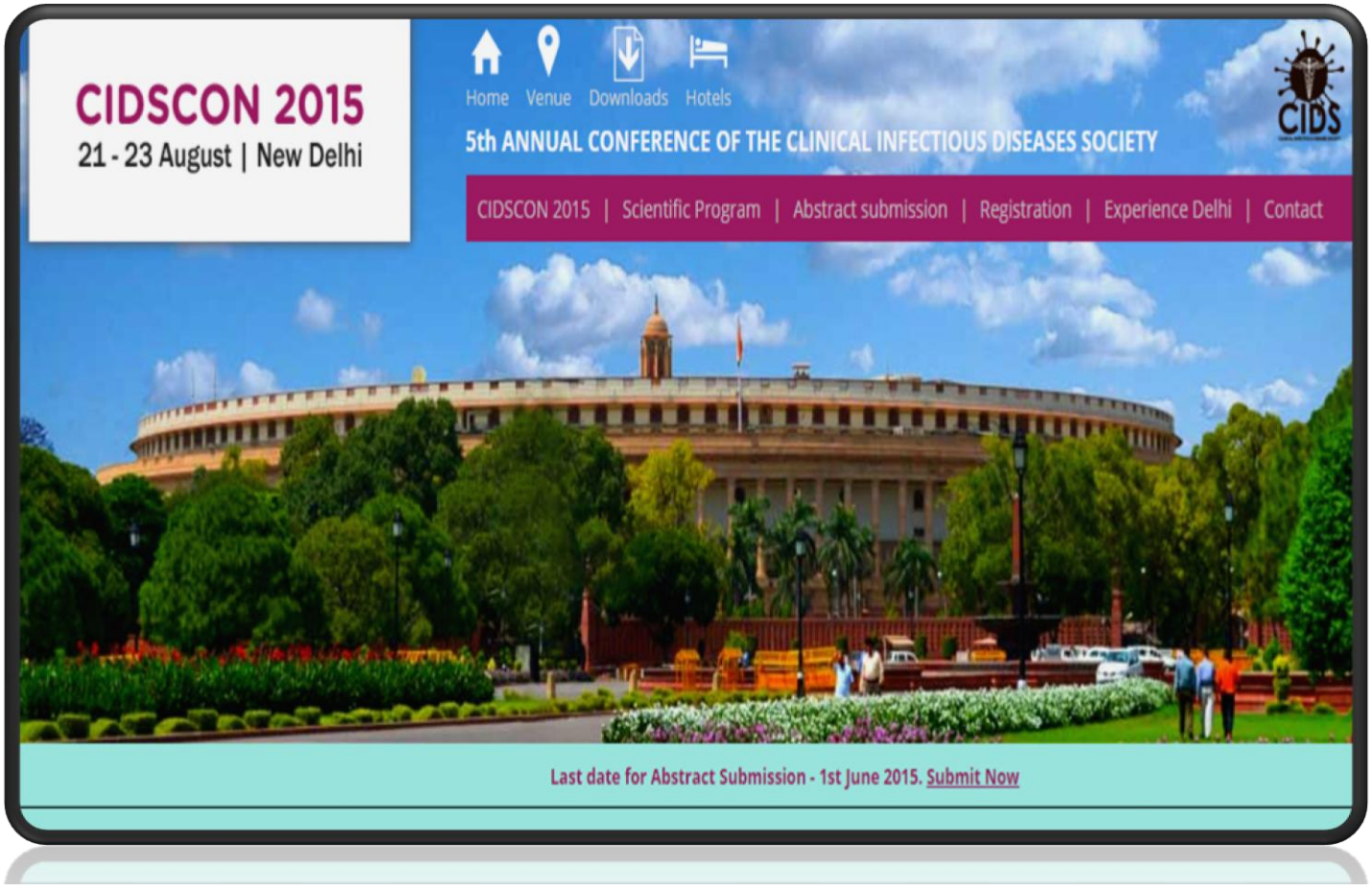
This randomised, double-blind, placebo-controlled, superiority trial was carried out involving 247 patients at 13 sites in India. Treatment-naive patients who were sputum-smear positive, HIV negative, and had pulmonary tuberculosis were randomly assigned (1:1), with centrally labelled, serially numbered bottles, to receive standard active tuberculosis treatment with either supplemental high-dose oral vitamin D_3 or placebo. Median time to culture conversion in the vitamin D group was 43·0 days (95% CI 33·3–52·8) versus 42·0 days (33·9–50·1) in the placebo group (log-rank p=0·95).
Further studies should investigate the role of vitamin D in prevention or reactivation of tuberculosis infection.

Guideline watch

http://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv-guidelines/37/whats-new-in-the-guidelines-

DHHS-USA has updated both adult and pediatric HIV treatment guidelines. Among the important changes are recommendations to use INSTI based regimens as first line therapy and TDF-FTC/3TC-EFV as an alternative regimen. In children < 5 years, absolute CD4 count cutoffs rather than CD4 percentages are to be used.

Upcoming conferences and meetings



Answer to photo quiz

Progressive Multifocal Leucoencephalopathy (PML) with IRIS after ART.

JC virus PCR from CSF was positive.

Three weeks after starting of ART the HIV-1 viral load had dropped to 1894 copies/mL and CD4 count was 84 cells/cmm (5.4%).

PML is a major opportunistic infection that affects up to 5% of patients with AIDS. Clinical features of confusion and focal neurological deficits and radiological features of asymmetric subcortical involvement with scalloping help differentiating it from HIV-associated neurocognitive dysfunction (HAND). Although brain biopsy is the gold standard for diagnosis, JC virus PCR has high sensitivity and specificity especially in patients not on ART. There is no specific treatment for PML. Optimization or initiation of ART can act as a double edged sword with an increase in 1 year survival from 10 % to 50% but with a risk of PML-IRIS which is a devastating complication with unclear treatment options and high mortality

(Case courtesy **Ayesha Sunavala, Piyush Chaudhari and Rajeev Soman)**