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CIDS Newsletter

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CLINICAL INFECTIOUS DISEASES SOCIETY

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Editor's note

Dear CIDS members

An exciting program is being drawn up for CIDSCON 2016 at Varanasi this year between 26-28 August, and there is a joint session with ESCMID as well. A sunrise session by the Ganges is planned on Sunday Aug 28th. As usual there will be an ID prize exam for postgraduates.

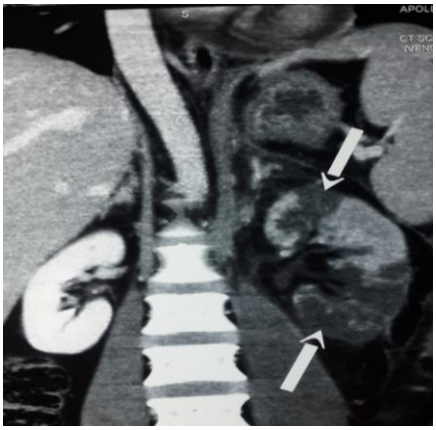
Block your dates and encourage your colleagues and juniors to attend!

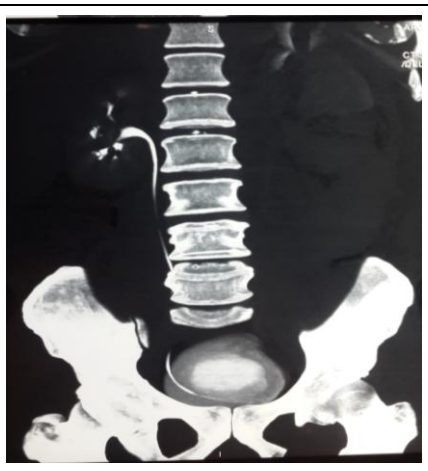
Sincerely

Ram Gopalakrishnan

Photo quiz

A 35/M previously healthy male presented with fever and renal colic. Investigations showed WBC count of 22,000 (polymorph predominant), microscopic hematuria and negative blood and urine cultures. Contrast CT (shown) revealed patchy non-enhancing areas in left kidney and DMSA scan (shown) revealed no function.





The patient was taken up for emergency nephrectomy but deteriorated rapidly post-op and expired due to septic shock.

What is your diagnosis?

CIDS welcomes the following new members

CIDS New members	
Dr. Parvinder K Chawla	Punjab
Dr. Madhuri Somani	Madhya Pradesh

News from the ID world

New HIV infections continue to decline in India

India has recorded a 66% decline in new HIV cases in the last 15 years, with an average of 86,000 new infections in 2015. The total number of people living with HIV is estimated at 21.17 laks in 2015 compared with 22.26 laks in 2007. National adult prevalence is 0.26% of which women constitute 40.5% and children 6.54%.

This reflects prevention efforts, but there will be plenty of patients to be treated for the next couple of decades at least.

Elbasvir plus grazoprevir approved, daclastasvir now available in India for hepatitis C

(courtesy Dr Surabhi Madan)

The U.S. Food and Drug Administration approved the combination of elbasvir and grazoprevir with or without ribavirin for the treatment of chronic hepatitis C virus (HCV) genotypes 1 and 4 infections in adult patients. After sofosbuvir and ledipasvir, it is the turn of daclatasvir to be marketed in India at rates well below the international rate.

Bedaquiline being introduced through public sector

This drug for XDR-TB will be available through select public sector hospitals for the treatment of XDR-TB. To avoid misuse and resistance, it will not be available for prescribing outside of these select centers.

Snippets from the literature

Global epidemiology of drug resistance after failure of WHO recommended first-line regimens for adult HIV-1 infection: a multicentre retrospective cohort study

Lancet ID; 28 Jan 2016
(courtesy Dr Surabhi Madan)

1926 patients from 36 countries with treatment failure between 1998 and 2015 were included in this study. Prevalence of tenofovir resistance was highest in sub-Saharan Africa (370/654 [57%]). Pre-ART CD4 cell count was the covariate most strongly associated with the development of tenofovir resistance (odds ratio [OR] 1·50 for CD4 cell count <100 cells per μL). Use of lamivudine versus emtricitabine increased the risk of tenofovir resistance across regions (OR 1·48, 95% CI 1·20–1·82). Of 700 individuals with tenofovir resistance, 578 (83%) had cytosine analogue resistance (M184V/I mutation), 543 (78%) had major NNRTI resistance, and 457 (65%) had both.

It appears that patients who start TDF based NNRTI regimens at low CD4 counts are most at risk for failure. Guidelines from WHO use lamivudine and emtricitabine interchangeably, the former being cheaper in India by Rs 500 or so, and therefore more widely used in co-formulated pills. This study gives reason to re-look at that recommendation.

Adjunctive Dexamethasone in HIV-Associated Cryptococcal Meningitis

N Engl J Med 374;6 nejm.org February 11, 2016
(courtesy Dr Surabhi Madan)

In this double-blind, randomized, placebo-controlled trial, adult patients with HIV-associated cryptococcal meningitis in Vietnam, Thailand, Indonesia, Laos, Uganda, and Malawi were recruited. All the patients received either dexamethasone or placebo for 6 weeks, along with combination antifungal therapy with amphotericin B and fluconazole. The trial was stopped for safety reasons after the enrollment of 451 patients. Mortality was 47% in the dexamethasone group and 41% in the placebo group by 10 weeks (hazard ratio in the dexamethasone group, 1.11; 95% confidence interval [CI], 0.84 to 1.47; P=0.45) and 57% and 49%, respectively, by 6 months (hazard ratio, 1.18; 95% CI, 0.91 to 1.53; P=0.20). The percentage of patients with disability at 10 weeks was higher in the dexamethasone group than in the placebo group, with 13% versus 25% having a prespecified good outcome (odds ratio, 0.42; 95% CI, 0.25 to 0.69; P<0.001)

Clinical adverse events were more common in the dexamethasone group than in the placebo group (667 vs. 494 events, P=0.01), with more patients in the dexamethasone group having grade 3 or 4 infection (48 vs. 25 patients, P=0.003), renal events (22 vs. 7, P=0.004), and cardiac events (8 vs. 0, P=0.004). Fungal clearance in cerebrospinal fluid was slower in the dexamethasone group.

Early ART should be avoided in cryptococcal meningitis, and now so should steroids. Back to therapeutic lumbar punctures!

Can tenofovir plus peginterferon cure chronic HBV infection?

Gastroenterology 2016 Jan 150:134

In this study, 740 patients (58% hepatitis B e antigen [HBeAg]–positive, 66% men, 75% Asian) with HBV infection were randomized in a 1:1:1:1 ratio to receive tenofovir (TDF) 300 mg once daily plus peginterferon α-2a (PEG) 180 μg weekly for 48 weeks; TDF plus PEG for 16 weeks followed by 32 weeks of TDF alone; TDF alone for 120 weeks; or PEG alone for 48 weeks. At week 72, hepatitis B surface antigen (HBsAg) loss (the primary endpoint) occurred at a rate of 9%, 3%, 0%, and 3% in the four groups, respectively. HBsAg loss was significantly higher in the 48-week TDF/PEG group compared with each monotherapy group and compared with the

16-week TDF/PEG.

HbsAg clearance by antivirals in chronic infection is unusual and most patients require long term suppression. Combination therapy of tenofovir plus peginterferon for 48 weeks achieved HBsAg loss, but only in nearly 1 out of 10 patients.

Role of surgery for pulmonary MDR-TB clarified

Clin Infect Dis. (2016)doi: 10.1093/cid/ciw002
January 12, 2016

This study looked at a total of 4238 patients from 18 surgical studies and 2193 patients from 8 nonsurgical studies. Partial lung resection surgery was associated with improved treatment success (adjusted odds ratio [aOR], 3.0); but pneumonectomy was not (aOR, 1.1). Treatment success was more likely when surgery was performed after culture conversion than before conversion (aOR, 2.6).

Entomological and serological investigation of Japanese encephalitis in an endemic area of eastern Uttar Pradesh.

J Vector Borne Dis. 2015;52(4):321-328

(courtesy Dr Ashwini Tayade)

The study was carried out during September 2010 - March 2013 in Gorakhpur district of Uttar Pradesh. A total of 251 adult mosquito pools and 64 water samples containing larvae were collected from the District of Gorakhpur. Water pH, turbidity, and oxygen level were analyzed for vector breeding index (BI). The various Culex_species found included, Cx. Quinquefasciatus (26 percent), Cx. Vishnui (22 percent), Cx. Pseudovishnui (21 percent), Cx. Tritaeniorhynchus (13 percent), Cx. Whitmorei (9 percent), and Cx. Gelidus (8 percent). Highest minimum infection rate (MIR) was calculated for Cx. tritaeniorhynchus (2.32), follo--wed by Cx. vishnui (1.98) and Cx. pseudovishnui (0.71). In addition, 393 serum/cerebrospinal fluid (CSF) samples of acute encephalitis syndrome (AES) suspected cases were collected from district hospital. A total of 41 clinical samples were found positive for JEV by IgM ELISA. Rainfall was significantly associated with Japanese encephalitis incidence and showed positive correlation to disease transmission ($p = 0.02$, $r = 0.66$).

Only 41 of 393 cases were confirmed as JEV: other etiologies, including Reye syndrome-like disease, lychee consumption, sun stroke, and enterovirus infection have been proposed as causes for AES.

Transfusion transmitted dengue: common but not a big deal?

J Infect Dis. (2016) 213 (5): 694-702.

A linked donor-recipient study was conducted during epidemics in 2 cities in Brazil to investigate transfusion-transmitted (TT) dengue virus (DENV) by DENV RNA–positive donations. DENV-4 viremia was confirmed in 0.51% of donations from subjects in Rio de Janeiro and 0.80% of subjects in Recife. Approximately one third of components resulted in TT. However, no significant clinical differences were evident between RNA-positive and RNA-negative recipients.

It appears that vector borne transmission is much more efficient at causing signs and symptoms of dengue, than TT. Utilizing dengue NAT, similar to what is done for West Nile virus in the USA, would screen blood products and prevent TT but may not be cost effective.

Re-emergence of dengue virus serotype 2 strains in the 2013 outbreak in Nepal

Ind J Med Res 2015;142(7):1-6
(courtesy Dr Ashwini Tayade)

A hospital-based study involving patients from five districts of Nepal was carried out during an outbreak in Nepal in 2013. Demographic information, clinical details and dengue serological status were obtained. Viral RNA was characterized at the molecular level by reverse-transcription polymerase chain reaction (RT-PCR), nucleotide sequencing and phylogenetic analysis. The authors demonstrate the involvement of DENV serotype 2 belonging to the Cosmopolitan genotype. Earlier outbreaks in the region in 2010 were attributed to serotype 1 virus.

Upcoming ID conferences and CME programs

17th International Congress on Infectious Diseases (ICID)

March 2-5, 2016, Hyderabad

http://www.isid.org/icid/

Chennai ART symposium (CART)

April 16-17, 2016, Chennai

ttps://www.yrgcare.in/cart/cart_welcome.htm

Guideline watch

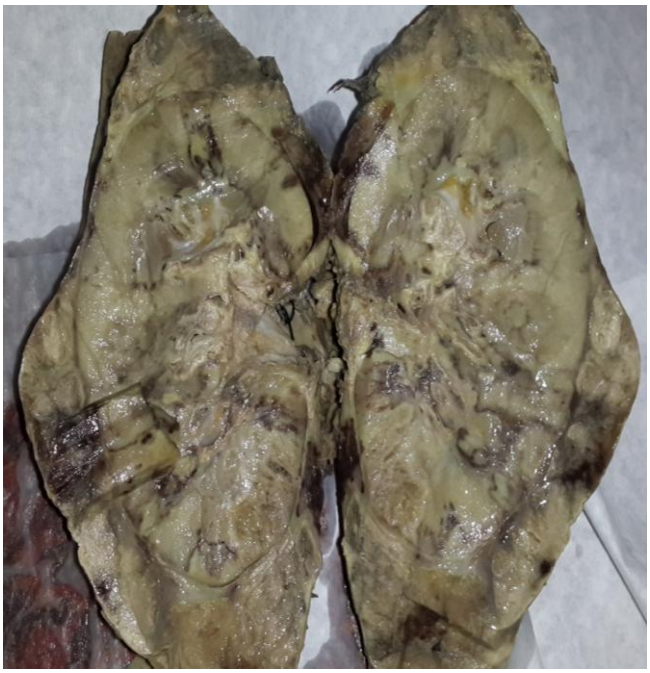
Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older: United States, 2016

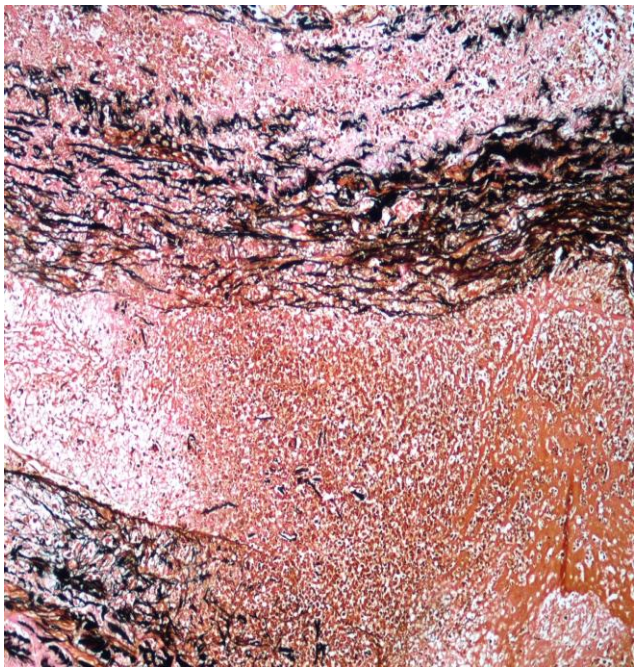
Annals of Internal Medicine, 2 February 2016

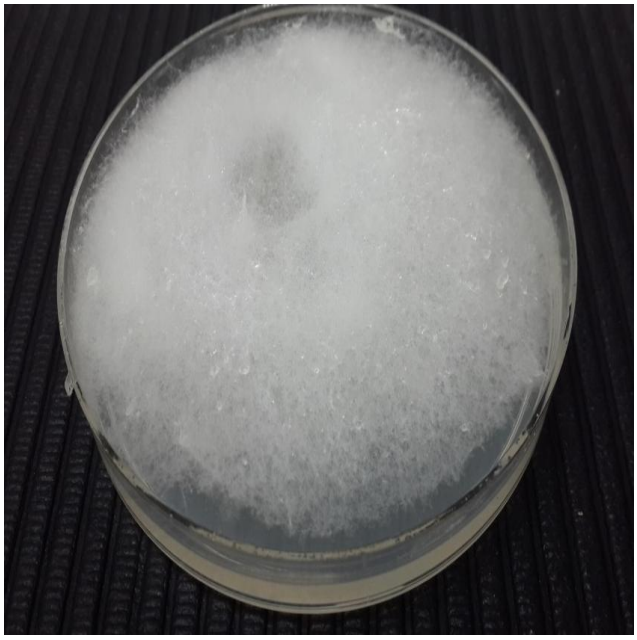
(courtesy Dr Surabhi Madan)

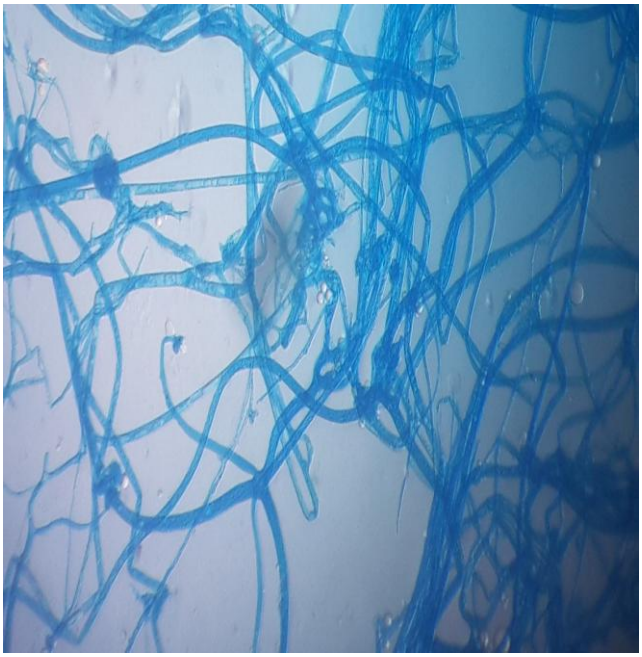
Answer to photo quiz

The removed kidney showed evidence of infarction and histopathology showed invasive broad aseptate fungal hyphae. Culture grew Mucor species.
Isolated renal mucormycosis has been reported in the literature and carries a poor prognosis without early diagnosis. Many patients have had no obvious risk factors.









Diagnosis: Renal mucormycosis with secondary dissemination

(case provided by Dr Madhumita R).

CIDSCON - 2016

6th Annual Conference of Clinical Infectious Diseases Society, India

Venue : Banaras Hindu University, Varanasi, Uttar Pardesh

Block your Dates

26th, 27th, 28th, August 2016

Varanasi, India.

Organising Chairman :
Dr.Shyam Sundar

Organising Secretary :
Dr.Jaya Chakravarty

Scientific Committee Chairperson : Dr.Rajiv Soman

For more details Logon to : www.cidscon.in