Volume 4, Issue 5

CIDS Newsletter

May 2017

CLINICAL INFECTIOUS DISEASES SOCIETY

Editor's note

Dear CIDS members

See you at Nagpur where an excellent academic program awaits us.

Sincerely

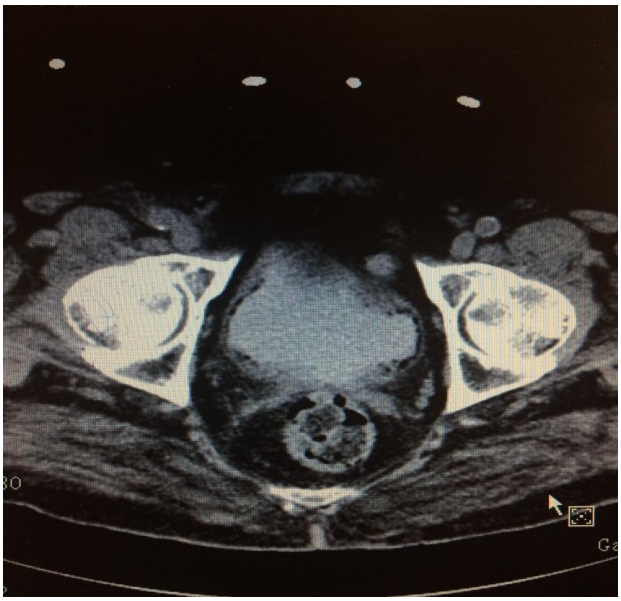
Ram Gopalakrishnan

Photo quiz

A 58-year old gentleman who recently underwent Transatrial valve implantation (TAVI) developed burning micturition, lower abdominal pain and fever. Physical examination revealed lower abdominal tenderness.

Investigations revealed Hb-10.1gm%, WBC- 17,600, platelet – 1,60,000. Creatinine-0.7 mg%

Computed tomographic scan of the abdomen is shown below.



What is your diagnosis?

News from the ID world

India develops National Action Plan to combat Antimicrobial Resistance

"Antimicrobial resistance is a serious threat to global public health that requires action across all government sectors and society and is driven by many interconnected factors. Single, isolated interventions have limited impact and coordinated action is required to minimize the emergence and spread of antimicrobial resistance." This was stated by Shri J P Nadda, Union Minister of Health and Family Welfare at at the 'Inter-Ministerial Consultation on AMR containment'. The Ministers later signed a 'Delhi Declaration' for collectively strategizing to contain AMR. It pledges to adopt a holistic and collaborative approach towards prevention and containment of antimicrobial resistance (AMR) in India. It calls on all stakeholders including UN, WHO, FAO and other UN agencies, civil society organizations etc., to support the development and implementation of the national and state action plans on AMR.

Shri J P Nadda stressed on the need to converge actions across ministries and departments and not work in silos, so as to not have segmented outcome: "We are working in the direction of pulling out malaise of AMR from the root. Health Ministry is at the receiving end as there are various layers and every layer needs to be addressed". He further added that the action plan has been prepared through extensive national consultations with various stakeholders. "In alignment with global action plan, India's action plan has objectives of enhancing awareness, strengthening surveillance, improving rational use of antibiotics, reducing infections and promoting research. In addition, India aims to support neighbouring countries in collective fight against infectious diseases," Shri Nadda elaborated.

Acknowledging the progress made by the Government in combating AMR, Shri Nadda said that Health Ministry has taken a lead in this effort at international fora and has initiated series of actions including setting up a National Surveillance System for AMR, enacted regulations (Schedule-H-1) to regulate sale of antibiotics, brought out National regulate sale of antibiotics, brought out National Guidelines for use of antibiotics etc. He further said that more efforts are required considering the large size of our country, magnitude of the problem and the fact that AMR needs to be addressed comprehensively under "One Health Approach". "This is a landmark occasion", said the Union Minister for Health. "We are ready with a blueprint that meets global expectations. The challenge now is in its efficient implementation through a coordinated approach at all levels of use of antibiotics," he added. Shri Nadda urged all State Governments to develop state-specific action plans and assured them of all possible assistance.

Hope concrete steps are taken and more importantly policed and enforced, in this area of extreme concern to all of us.

Snippets from the literature

Prophylactic Platelet Transfusion in Dengue Fever Not Superior to Supportive Care Alone

Lancet 2017 Mar 7; [e-pub].
(http://dx.doi.org/10.1016/S0140-6736(17)30269-6)

To assess the efficacy and safety of platelet transfusion in preventing bleeding in adults with dengue and thrombocytopenia (≤20,000 platelets/μL), investigators conducted an open-label, superiority trial in five hospitals in Singapore and Malaysia. The researchers randomized 369 patients to routine supportive care either with transfusion (4 units of pooled platelets each day when platelet count was ≤20,000) or without transfusion (controls).In the intention-to-treat analysis, clinical bleeding was not significantly more common in controls: 40 patients (21%) with transfusion versus 48 (26%) in controls. Outcomes were also similar between treatment groups for those with platelet counts <5000 at baseline. Similar numbers developed plasma leakage (11% in transfused vs. 10% in control patients). Time to platelet recovery was similar in both groups. Hemorrhagic fever or shock syndrome occurred in two patients in each group. No patient died. There were 13 adverse events in the transfusion group and two in the control group, including several that may have been transfusion-related (urticaria, maculopapular rash, pruritus, anaphylaxis, transfusion-related lung injury, fluid overload).

No benefit to transfusion and side effects go up, even if platelets <5000. The findings in this study support current WHO guidelines in recommending against prophylactic platelet transfusions for thrombocytopenia in dengue, in the absence of bleeding.

Efficacy, Safety, and Pharmacokinetics of Co-administered Diethylcarbamazine, Albendazole, and Ivermectin for Treatment of Bancroftian Filariasis

Clin Infect Dis. 2016; 62: 334–341

The authors performed a pilot study to test the the efficacy, safety, and pharmacokinetics of single-dose DEC, IVM, and ALB in Wuchereria bancrofti-infected Papua New Guineans. Adults were randomized into 2 treatment arms, DEC 6 mg/kg + ALB 400 mg (N = 12) or DEC 6 mg/kg + ALB 400 mg + IVM 200 μg/kg (N = 12), and monitored for microfilaria, parasite antigenemia, adverse events (AEs), and serum drug levels. Triple-drug therapy induced >2-log reductions in microfilaria levels at 36 and 168 hours after treatment compared with approximately 1-log reduction with 2 drugs. All 12 individuals who received 3 drugs were microfilaria negative 1 year after treatment, whereas 11 of 12 individuals in the 2-drug regimen were microfilaria positive. No serious AEs were observed in either group.

Triple-drug therapy is safe and more effective than DEC + ALB for Bancroftian filariasis and has the potential to accelerate elimination of lymphatic filariasis.

Efficacy of an Indian made Low-Cost, Heat-Stable Oral Rotavirus Vaccine in Niger

N Engl J Med 2017; 376:1121-1130

This study documents the safety and efficacy of an oral bovine rotavirus pentavalent vaccine (BRV-PV) developed and made in India by Serum Institute of India. Healthy infants received three doses of the vaccine or placebo at 6, 10, and 14 weeks of age. Episodes of gastroenteritis were assessed through active and passive surveillance. Three doses of BRV-PV, an oral rotavirus vaccine, had an efficacy of 66.7% against severe rotavirus gastroenteritis. No serious adverse effects or episodes of intussusception were recorded.

The authors describe a rotavirus vaccine that is thermostable for 24 months at 37°C and for 6 months at 40°C, which may provide advantages for vaccine delivery in remote areas where cold-chain capacity is limited. Current vaccines are more expensive and require a cold chain.

Invasive pneumococcal disease in children aged younger than 5 years in India: a surveillance study

(courtesy Dr Vidya Krishna)
Lancet Infect Dis 2017; 17: 305–12

In this prospective hospital-based and retrospective laboratory-based surveillance study, the authors prospectively enrolled children aged younger than 5 years with suspected or proven invasive pneumococcal disease from 18 hospitals or institutional centres and retrospectively included laboratory-confi rmed pneumococcal isolates from ten sentinel laboratories, a total of 4377 patients. Among 361 (8%) patients with culture proven pneumococcal disease, all clinical data were known for 226 (63%); among these patients, 132 (58%) presented with pneumonia, 78 (35%) presented with meningitis, and 16 (7%) had other clinical conditions. 131 (3%) died overall and 29 (8%) patients with invasive pneumococcal disease died. Serotypes 14 (52 [14%] of 361), 1 (49 [14%]), 5 (37 [10%]), and 19F (33 [9%]) were the most common. Penicillin non-susceptibility occurred in isolates from 29 (8%) patients, co-trimoxazole resistance occurred in 239 (66%), erythromycin resistance occurred in 132 (37%), and chloramphenicol resistance occurred in 33 (9%).
Reassuringly, most of the common serotypes are covered by the conjugate pneumococcal vaccine, which should be part of the routine childhood immunization schedule. Penicillin resistance overall was low but in meningeal isolates, penicillin resistance was 17% vs 4% in non-meningeal isolates. Perhaps it is safer to retain vancomycin as part of an empiric meningitis regimen till susceptibility data is back.

Influenza vaccine after SOT: two doses better than one

Clin Infect Dis (2017) 64 (7): 829-838

TRANSGRIPE 1–2 was a phase 3, randomized, controlled, multicenter, open-label clinical trial. Patients were randomly assigned (1:1 stratified by study site, type of organ, and time since transplantation) to receive 1 dose (control group) or or 2 doses (booster group) of the influenza vaccine 5 weeks apart. A total of 499 SOTR were enrolled.
Although seroconversion at 10 weeks did not meet significance in the modified intention-to-treat population, seroconversion rates were significantly higher in the booster arm for the per-protocol population (53.8% vs 37.6% for influenza A(H1N1)pdm; 48.1% vs 32.3% for influenza A(H3N2); and 90.7% vs 75% for influenza B; $P < .05$). Furthermore, seroprotection at 10 weeks was higher in the booster group: 54% vs 43.2% for A(H1N1)pdm; 56.9% vs 45.5% for A(H3N2); and 83.4% vs 71.8% for influenza B ($P < .05$). The number needed to treat to seroprotect 1 patient was <10. The clinical efficacy (99.2% vs 98.8%) and serious adverse events (6.4% vs 7.5%) were similar for both groups.
The authors conclude that in SOTR, a booster strategy 5 weeks after standard influenza vaccination is safe and effective and induces an increased antibody response compared with standard influenza vaccination consisting of a single dose.

Asymptomatic Cryptococcal Antigenemia in People Living with HIV (PLHIV) with Severe Immunosuppression: Is Routine CrAg Screening Indicated in India?

(Dr Amarjit Singh Vij)
JAPI, April 2017

This prospective study was conducted in a tertiary care, public health facility in New Delhi, India. Prevalence of CrAg was assessed in 128 ART naive adult PLHIV with CD4 < 100 cells/mm3 using a latex agglutination test. Age, gender, weight, body mass index (BMI), CD4 count, haemoglobin, serum albumin, and presence of other OI were evaluated as determinants of CrAg positivity. Subjects were followed up for occurrence of CM and mortality (all-cause) at 12 weeks and 6 months.
Mean CD4 counts of the subjects was 54.9±26.58 cells/mm3 and 42.97% had CD4 < 50 cells/mm3. The prevalence of CrAg in the subjects was 3.125 % (4/128). None of the factors assessed showed statistically significant difference between the 2 groups, though CD4 count <50 cells/mm3, low serum albumin and presence of oral candidiasis had a stronger association with CrAg positivity. None of the subjects developed CM during follow up. At 12 weeks, 3/4 (75%) CrAg positive patients were alive compared to 118/124 (95.16%) of CrAg negative subjects. At 6 months, 50% (2/4) CrAg positive patients had died compared to 10.48% (13/124) CrAg negative ($p<0.01$).
The authors concluded that though CrAg prevalence in

in PLHIV with CD4<100 cells/mm3 is moderate, asymptomatic CrAg positivity among PLHIV with CD4 < 100cells/mm3 is significantly associated with higher all-cause mortality. CrAg testing is very cost effective and India's National AIDS Control Programme should seriously consider routine screening among the severely immunosuppressed PLHIV.

Chandra's Corner

(Dr PH Chandrasekar)

A recent news surprised and shocked me– female genital cutting or mutilation among Indian children in the U.S. It took me several minutes to digest the information. An Indian woman physician in Michigan has been arrested in this regard and is to be federally prosecuted soon. For the first time, such a case is being pursued by the U.S. Federal Government. Girls, usually 7-10 years of age, are taken to "clinic" by their parents, at the advice of their religious leaders, for getting the child's external genitalia 'cut' with the belief that this act reduces sexual pleasure or curbs sexuality. Among Indian Muslims, this practice appears to be unique in a small sect called "Dawoodi Bohra" community. The practice is covertly encouraged by the sect leaders and usually kept a secret even within families. Such a procedure is associated with bleeding, infections, pain, scarring, urinary and obstetrical complications. There are over half a million similar cases in the US, mostly from the African countries. Over 90% of girls from Ethiopia, Somalia and Sudan go through this "circumcision" ritual. This barbaric act that results in no benefit to anyone but inflicts enormous physical and emotional pain/shame on young children, continues to be promoted by the religious leaders and the parents, under pressure, feel trapped, reluctantly submit their children to this torture. This news has captured the attention of the US national media, yet I am not hopeful that anything will change unless the 'religious leaders' have a change of heart. I'm sure this is happening in your region as well, have you come across any such instance? The Indian physician in this case claims no wrong doing and maintains that she did not "cut" but only wiped or removed a membrane. Likely story.

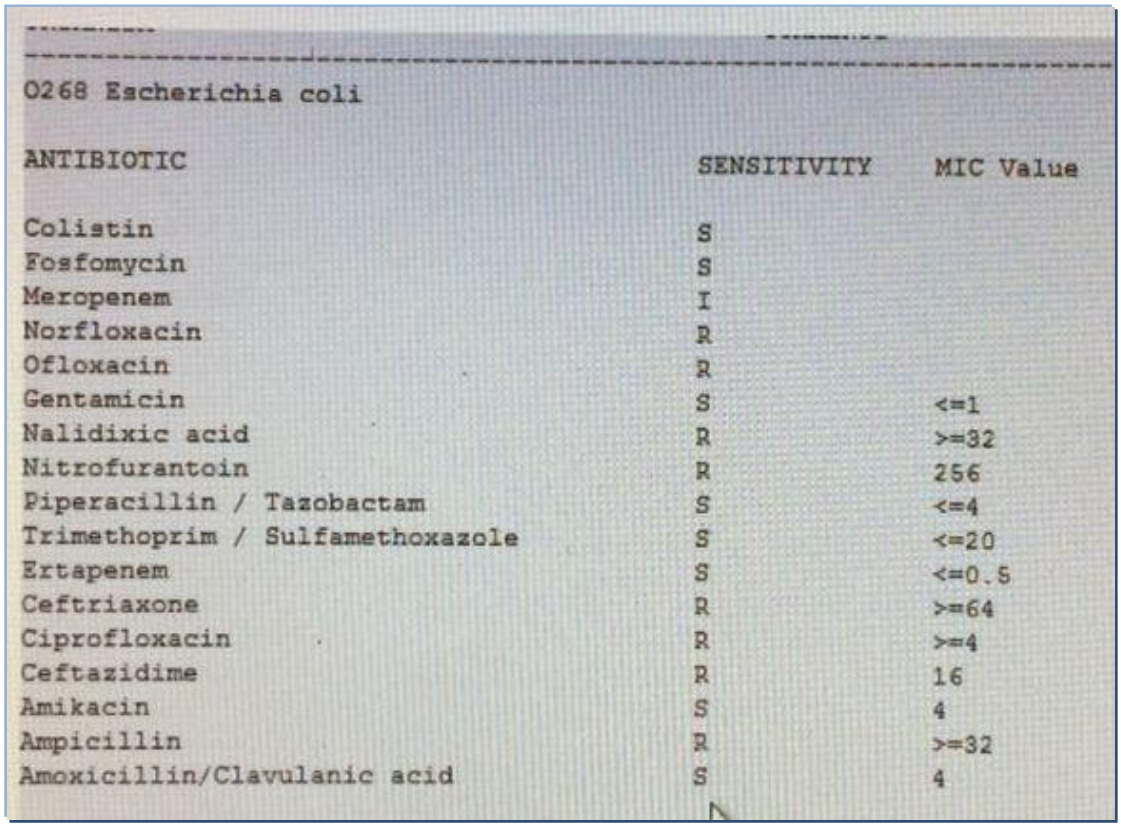
Moving on to the subject of antibiotic resistance,I came across a good paper in PLOS/Me--dicine (March 2016) titled "Antibiotic Resistance in India: Drivers and Opportunities for Action" by Drs. Ramanan Laxminarayan and Ranjit Roy Chaudhury (deceased). Did you know antibiotic consumption overall has increased by 30% from 2000 to 2010? In the US, 70% of antibiotic use is for animal growth promotion, in other words, fattening them up for early slaughter. There is a lot of "talk" about antibiotic stewardship in humans in India. Recent surveys have shown little real progress despite detailed institutional stewardship programs on paper. Furthermore, there is no government regulation in 2 other important areas, namely animal husbandry, and waste disposal at antibiotic-manufacturing facilities. These facility owners have "powerful lobbyists" in the Indian parliament, and they hate to have their hands tied by regulations regarding disposal of antibiotic-contaminated waste at their facilities. How does CIDS campaign for such regulations? Perhaps our first exercise should be to bring awareness of this issue in the lay media.

March-April is tax return time in the US. When I dutifully submitted mine, I was told that the Internal Revenue Service has already received mine! How is this possible? Someone stole my identity and proceeded to submit the return under my name claiming a tax refund. Fortunately, this criminal act was caught in the nick of time and a mini-catastrophe in my life was averted. Perils of US life!

Answer to photo quiz

An abdominal computed tomographic scan revealed an area of gas dissecting the bladder wall, and intramural gas with a cobblestone or beaded-necklace appearance findings consistent with emphysematous cystitis. The patient was initially started on meropenem empirically and placement of a Foley catheter. Subsequently, a urine culture was positive for *Escherichia coli.* Meropenem was de-escalated to amoxicillin-clavulanic acid and patient recovered uneventfully.

Emphysematous cystitis is a urinary tract infection that is associated with gas formation and is commonly caused by *E. coli* and *Klebsiella pneumoniae*. It can also be caused by candida sp. in a diabetic patient.

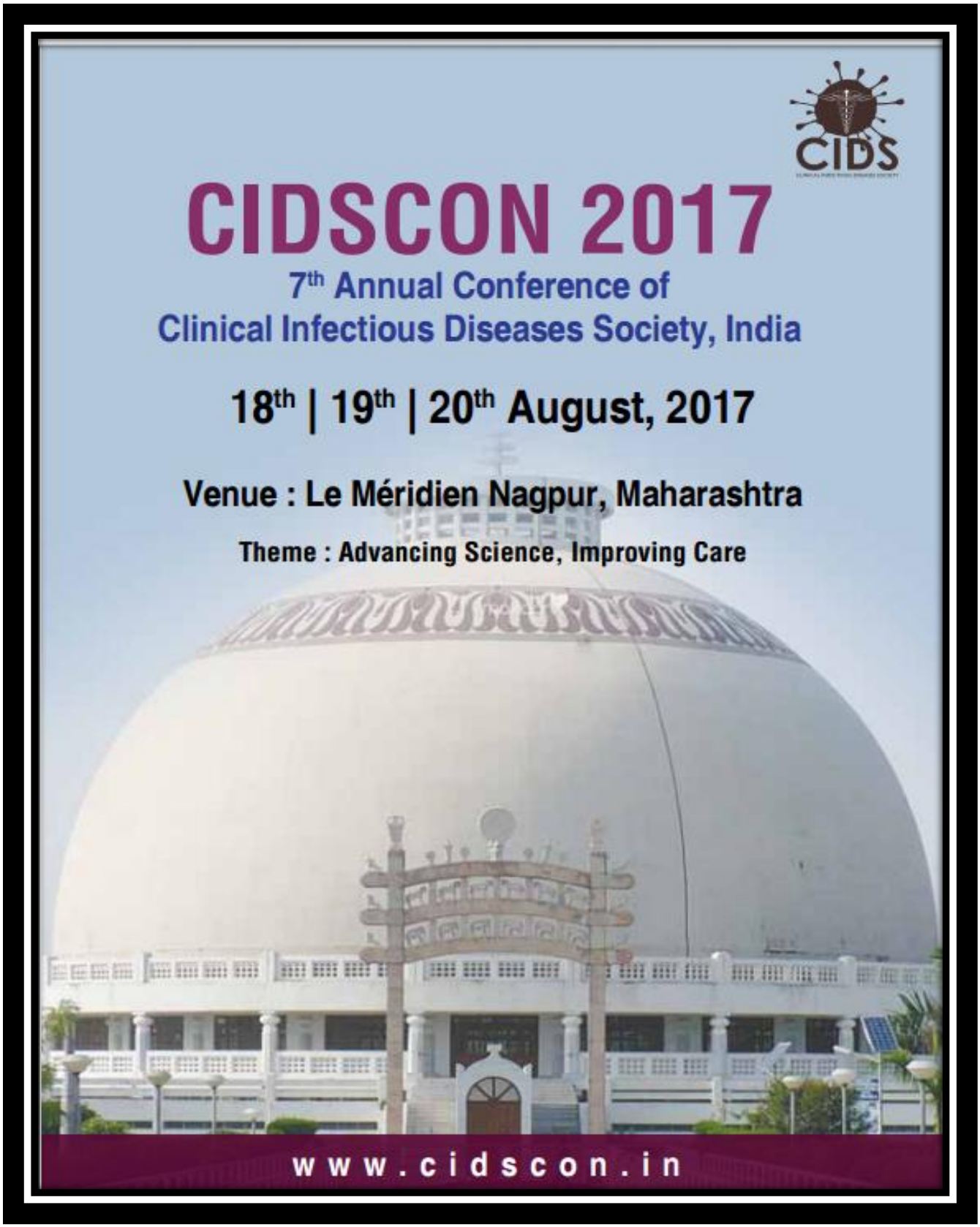


0268 Escherichia coli

ANTIBIOTIC	SENSITIVITY	MIC Value
Colistin	S	
Fosfomycin	S	
Meropenem	I	
Norfloxacin	R	
Ofloxacin	R	
Gentamicin	S	<=1
Nalidixic acid	R	>=32
Nitrofurantoin	R	256
Piperacillin / Tazobactam	S	<=4
Trimethoprim / Sulfamethoxazole	S	<=20
Ertapenem	S	<=0.5
Ceftriaxone	R	>=64
Ciprofloxacin	R	>=4
Ceftazidime	R	16
Amikacin	S	4
Ampicillin	R	>=32
Amoxicillin/Clavulanic acid	S	4

Urine Culture positive for the E. coli

Final diagnosis: Emphysematous cystitis
(case provided by Dr Neha Gupta and Dr N P Gupta)


CIDS
CIDSCON 2017
7th Annual Conference of
Clinical Infectious Diseases Society, India
18th | 19th | 20th August, 2017
Venue : Le Méridien Nagpur, Maharashtra
Theme : Advancing Science, Improving Care
www.cidscon.in

Welcome to CIDSCON 2017!

Dear Colleagues,

The Clinical Infectious Diseases Society is proud to host the 7th annual conference CIDSCON 2017, at Nagpur from 18th to 20th August 2017 and pleased to welcome you for an academic marathon and get together.

"The way of success is the way of continuous pursuit of knowledge."

With the theme 'Advancing science and improving care' we aim to update recent developments in the field of ID, targeting infections in a variety of hosts including the immuno-compromised, effects of immuno-modulation, PK/PD of antibiotics, tropical infections, tuberculosis, invasive fungal infections, transplant ID, HIV & AIDS, antimicrobial stewardship, infection control and many more! This veritable feast will have many National and International stars as faculty.

CIDS, since its inception, has been striving hard not only to enhance and share the treasure of knowledge amongst the medical fraternity, but has also been taking measures to help implement evolving trends to improve our practice in the field of ID.

At Nagpur, we aim to continue and strengthen this tradition and provide you the company of some of the best from an array of infectious diseases specialists from around the globe. Our focus is to create a platform for you to share your experience, discuss your views and upgrade the knowledge in this discipline of medicine.

Nagpur, famous for its oranges, also called "Tiger capital of India, for the rich wildlife nearby and surely a jungle safari at the end of the conference would be a refreshing and rejuvenating experience.

We welcome you for this bonanza !

Dr. V Ramasubramanian
Organizing Chairperson

Dr. O C Abraham
Scientific Committee Chairperson

Dr. Ashwini Tayade
Organizing Secretary

Important Dates

Last Date for Abstract Submission
31st May, 2017

For Online Abstract Submission and Guidelines logon to
www.cidscon.in

Last Date for Earlybird Registration
15th April, 2017

For Online Payment and registration logon to
www.cidscon.in