Volume 4, Issue 3

CIDS Newsletter

March 2017

CLINICAL INFECTIOUS DISEASES SOCIETY

Editor's note

Dear CIDS members

Please note the changed dates for CIDSCON 2017 in Nagpur which will be now be from August 18-20. The earlier dates coincided with the Ganesh festival which might affect logistics and attendance.

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

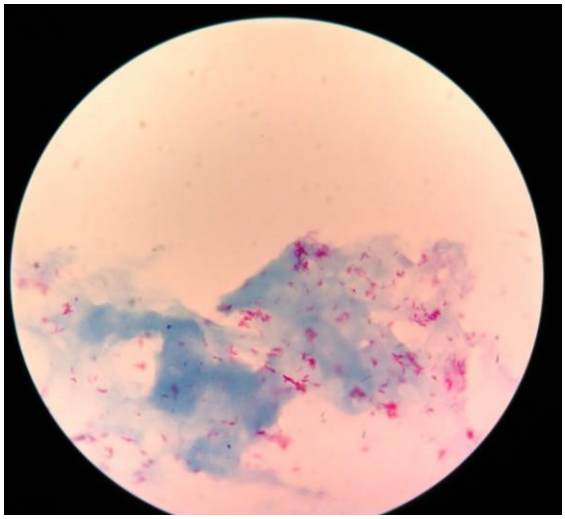
Sincerely

Ram Gopalakrishnan

Photo quiz

A 32-year old gentleman with rheumatic mitral stenosis had undergone balloon mitral valvotomy elsewhere. Two months later, he developed low grade fever and was referred for PUO. He had received ceftriaxone, gentamicin, vancomycin without any significant improvement.

Investigations revealed Hb-10.1gm%, WBC- 2600, platelet – 1,20,000, CRP 41. TTE & TEE revealed a flagellar vegetation at the mitral valve (MV). Blood cultures on day 4 were positive. **(Figure 1)**



What is your diagnosis?

News from the ID world

Procalcitonin gets FDA approval

The U.S. Food and Drug Administration cleared the expanded use of the Vidas Brahms PCT Assay to help health care providers determine if antibiotic treatment should be started or stopped in patients with lower respiratory tract infections, such as community-acquired pneumonia, and stopped in patients with sepsis. This is the first test to use procalcitonin(PCT), a protein associated with body's response to a bacterial infection, as a biomarker to help make antibiotic management decisions. High levels of PCT suggest a bacterial infection, while low levels suggest a viral infection or non-infectious causes. Clinicians may be able to use PCT and other information to safely withhold or stop antibiotics.

Snippets from the literature

XDR-TB in HIV co-infected in South Africa: largely due to cross transmission

N Engl J Med 2017; 376:243-253

The authors conducted a prospective study involving 404 participants in KwaZulu-Natal Province, South Africa, with a diagnosis of XDR tuberculosis between 2011 and 2014. Of the 404 participants, 311 (77%) had HIV infection; the median CD4+ count was 340 cells per cubic millimeter (interquartile range, 117 to 431). A total of 280 participants (69%) had never received treatment for MDR tuberculosis. Genotypic analysis in 386 participants revealed that 323 (84%) belonged to 1 of 31 clusters.

The majority of cases of XDR tuberculosis in KwaZulu-Natal, South Africa, an area with a high tuberculosis burden, were probably due to transmission rather than to inadequate treatment of MDR tuberculosis. These data suggest that control of the epidemic of drug-resistant tuberculosis requires an increased focus on interrupting transmission.

TB Prophylaxis Cuts Mortality in HIV Patients

CROI 2017 Abstract 78

This 3 year follow up of the isonazid prophylaxis arm of the TEMPRANO study showed that the hazard ratio of death was 0.61, favoring isoniazid. Investigators were able to rule out TB by looking at clinical signs and symptoms, combined with a chest x-ray.

This is the first analysis to show a reduction in mortality with isoniazid prophylaxis.

Steroids prevent TB-IRIS in HIV patients initiating ART

CROI 2017 Abstract 81LB

A total of 240 patients were included in the placebo-controlled, double-blind, randomized clinical trial. Patients were treated with prednisone at 40 mg a day for 2 weeks and then 20 mg of prednisone for an additional 2 weeks, or were assigned to receive placebo. Patients were initiated on HIV treatment at the same time they started placebo or prednisone. The average age of the patients was 36, about 60% were men, and the CD4-positive cell count at baseline was about 50 cells/$mm^{3.}$ TB-IRIS was observed in 46.7% of the 120 patients who were assigned to placebo and 32.5% of the 120 patients who were treated with prednisone (P=0.02). 15.1% of the placebo patients developed new AIDS-defining infection or invasive bacterial infections compared

with 9.2% of the patients on placebo (*P*=0.17).

Institution of steroids at the time of ART in patients with advanced AIDS appears to be safe and reduces TB-IRIS.

Recurrent Throat Infections in Children: Surgery or Watchful Waiting?

Pediatrics 2017 Jan 17.

Recurrent tonsillitis is an indication for tonsillectomy, but the effectiveness of surgery compared with more-conservative watchful waiting is not clear. Many studies examining the benefits of tonsillectomy are challenged by strict definitions of tonsillitis and lack of long-term follow-up data. These authors conducted a systematic review of studies published over the past 4 decades comparing tonsillectomy with watchful waiting for children with recurrent throat infections. Watchful waiting could include an intervention, such as antibiotics. Seven articles met inclusion criteria for comparative study design, appropriate interventions, and measurement of outcomes. The studies varied in reported outcomes and definition of throat infection. Most children enrolled in the studies had mild or moderate pharyngeal symptoms.

Overall, the four randomized controlled trials demonstrated that children who underwent tonsillectomy had fewer visits for sore throat during the first postoperative year compared with children in the watchful waiting group. Based on assessment of the strength of the evidence for each study, the authors conclude that tonsillectomy provides some short-term benefits over watchful waiting — fewer episodes of sore throat and fewer streptococcal infections —and that there is insufficient evidence to determine whether these benefits persist.

SLE and immunosuppressants for it predispose to infection

http://www.semarthritisrheumatism.com/article/S0049-0172(17)30075-6/fulltext

All patients in the Spanish Rheumatology Society Lupus Registry (RELESSER) who meet ≥ 4 ACR-97 SLE criteria were retrospectively investigated for severe infections. Patients with and without infections were compared in terms of SLE severity, damage, comorbidities and demographic characteristics. A multivariable Cox regression model was built to calculate hazard ratios (HRs) for the first infection.

A total of 3,658 SLE patients were included: 90% female, median age 32.9 years (DQ 9.7) and mean follow-up (months) 120.2 (±87.6). A total of 705 (19.3%) patients suffered ≥ 1 severe infection. Time from first infection to second infection was significantly shorter than time from diagnosis to first infection (p<0.000). More than half of the infections were bacterial, and in almost one-third, the etiology was unknown. The site of infection most often was the respiratory tract (35.5%), followed by the urinary tract (15%). Bloodstream infections were the most frequent cause of mortality by infection (42.0%). In the Cox regression analysis, the following were all associated with infection: age at diagnosis (HR 1.016; 95% CI:1.009–1.023), corticosteroids (≥10 mg/day) (HR 1.271; 95% CI: 1.034–1.561), immunosuppressors (HR 1.348; 95% CI:1.079–1.684), hospitalization by SLE (HR 2.567; 95% CI:1.905–3.459) , Katz severity index (HR 1.160; 95% CI:1.105–1.217), SLICC/ACR damage index (HR 1.069; 95% CI:1.031–1.108) and smoking (HR1.332; 95% CI:1.121–1.583). Duration of antimalarial use (months) proved protective (HR 0.998; 95% CI: 0.997–0.999).

Severe infection constitutes a predictor of poor prognosis in SLE patients, is more common in Latin Americans and is associated with age, previous infection and smoking. Antimalarials exerted a protective effect.

Guideline Watch

New IDSA Ventriculitis and Meningitis Guidelines

https://academic.oup.com/cid/article/2996079/2017-Infectious-Diseases-Society-of-America-s?searchresult=1

Upcoming meetings and conferences

Chennai ART symposium (CART)

March 25-26, 2017

www.yrgcare.in/cart/cart_welcome.htm

Answer to photo quiz

Blood culture grew rapidly growing non-tuberculous mycobacteria.

NTM IE is increasingly becoming recognized as a significant etiology of nosocomial endocarditis from the developing world. It must be considered as a differential diagnosis in patients presenting with PUO following a cardiac intervention like percutaneous transluminal coronary angioplasty (PTCA) or valvotomy. Species identification with DST should be done as increasing resistance is being recognized even among the NTM.

Infection control measures and avoiding reuse of single-use devices needs to be emphasized to prevent this disastrous complication.

Final diagnosis: Non tuberculous mycobacteria (NTM) infective endocarditis - post balloon mitral valvotomy

(case provided by Dr Neha Gupta, Dr Smita Sarma and Dr R R Kasliwal)