THE FEDERATION OF INFECTIOUS DISEASES SOCIETIES OF SOUTHERN AFRICA

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Special points of interest:

- 5th FIDSSA Conference 2013
- 2013 FIDSS-GSK research fellowships
- R10,000 first prize for best oral presentation at FIDSSA Congress

5th FIDSSA Conference - 10-12 October 2013
International & Plenary Speakers

From Top left: **Prof Gunnar Kahlmeter**, (University of Oslo, President of ESCMID) - Antimicrobial sensitivity testing, **Prof David Hamer** (Boston University) - Treating malaria, pneumonia & diarrhoea in children at the community level, **Prof Nick White** (Mahidol-Oxford Tropical Medicine Research Unit, Bangkok) - Containing antimalarial resistance, **Prof Shabir Madhi** (NICD) - Maternal Vaccination, **Prof Helen Rees** (University of Witswatersrand) - HPV vaccines, **Prof Quarraisha Abdool Karim** (UKZN) - HIV prevention, **Prof Karen Barnes** (UCT) - Margaretha Isaacson Lecture, Malaria, **Prof Jeanne Marrazzo** (University of Washington) - Sexually transmitted infection syndromes, **Prof Mark Cotton** (University of Stellenbosch) - The HIV Cure, **Prof Robert Heyderman** (Liverpool School of Hygiene & Tropical Medicine & WT Malawi) - Severe bacterial infections in Africa, **Prof Eli Schwartz** (Tel Aviv University) - Travellers ad Sentinels, **Prof Robert Wilkinson** (UCT) - Differential pathogenesis of tuberculosis in HIV-infected & non-infected patients**,**

Prof Francois Venter (Wits) - Incentivizing people to remain HIV seronegative [Ethics session], **Dr Gilles van Cutsem** (MSF) - ART scale up in Southern Africa, **Prof Debbie Goff** (Ohio State University) - iShould do it, iCan do it, iDo it...Stewardship 2013, **Prof David Lewis** (NICD) - The rise in STD resistance, **Prof Arjen Dondorp** (Mahidol-Oxford Tropical Medicine Research Unit, Bangkok) - Improving outcomes in severe malaria, **Dr Mary-Ann Davies** (UCT) - Paediatric HIV infection. **Prof Magnus Unemo** (Orebro University Hospital, Sweden) - Molecular mechanisms of resistance in *Neisseria gonorrhoea*. **NOT PICTURED - Prof Robert Davidson** (University of London) - Update on the management of non-malarial African protozoal infections and **Connie Cutler RN** (Philadelphia) - Clinical bundles & people bundles - a match made in heaven?

There will be a number of Meet the Professor sessions, industry-sponsored breakfast symposia and training workshops for nurses and doctors alike. Social events will include a welcome reception and gala dinner. Champagne Sports Resort is a fantastic venue for accompanying families and to stay on Sunday to make use of the many activities that are on offer from hiking, to mountain biking to golf and of course, the Spa. See you there.

REMEMBER: 1ST PRIZE FOR BEST ORAL PRESENTATION IS R10, 000. BEST POSTER RECEIVES R5, 000

SAASP
SOUTH AFRICAN ANTIBIOTIC STEWARDSHIP PROGRAMME

Pre-Conference Workshop and News from the field

On 7th May 2013, co-chairs of SAASP, Adrian Brink and Marc Mendelson met with the National Minister of Health, Dr Aaron Motsoaledi in Cape Town. Planning for this meeting had been undertaken during SAASP's working group meeting in November 2012. The aim of the meeting was to appraise the Minister of the rise in multi-drug resistant bacterial infections in South Africa and the need for a national response focusing on antibiotic stewardship and tightening of infection prevention control practices. The Minister was fully engaged and committed to addressing the problem. A number of meetings are being planned on a national scale to start the ball rolling. We will feedback further as this progresses.

On Thursday 10th October, the next SAASP workshop, will take place as a pre-FIDSSA conference event. The programme has been drawn up by the SAASP working group and is available on the FIDSSA conference website accessible from the FIDSSA homepage (http://www.fidssa.co.za). Invited speakers (pictured below) will






be Debbie Goff from Ohio State University (Keynote address), Adrian Brink will give a State of the Nation, Gary Maartens will tackle Vancomycin and Colistin dosing, Andrew Whitelaw and Preshnie Moodley will debate Search and Destroy tactics for addressing CRE and Adriano Duse will discuss the way forward for the SAASP/GARP-SA partnership. One session will be dedicated to feedback on the results of major antibiotic stewardship interventions that have been trialled in the last year and there will be a free paper session, where the best six oral presentations chosen from submitted abstracts will be presented.

Feedback from the Conference of the International Society of Travel Medicine, Maastricht 2013

South African Society of Travel Medicine

The biennial Congress of the International Society of Travel Medicine held in Maastricht in May provided many a serious consideration and some quite light hearted amazing facts. What is more than distressing is the apparent end of the antibiotic line with drug resistance emerging in every which corner. My concern is that the inappropriate use of antibiotics does not seem to be addressed at the general practitioner level, and also at public level.

What was noticeable was the number of dogs that travel – a fact which I encountered at the hotel where I was staying. In South Africa this is not something which I have come across, but in Holland, some 58,000 dogs travel during the summer season. A case for developing veterinary travel medicine?

Venous thromboembolism (VTE) was once again on the forefront along with many other topics. Low molecular weight heparin remains the medication of choice for prophylaxis for those travellers at HIGH risk and who are not on warfarin. There is no evidence at this stage that novel oral anticoagulants are effective in preventing VTE events in travellers. The use of compression stockings even now seems to be of little benefit but if the traveller wants to use them, then by all means allow them to do so. There is agreement that aspirin is of no benefit in preventing VTE. The risk for VTE events also depends on the number of long haul flights in an eight week period. Of those who develop a VTE, 29% present and are diagnosed within the first week post travel, the majority are diagnosed by eight weeks post travel.

There was quite some hue and cry about administering vaccines intramuscularly to travellers who are on warfarin. At the end of it all, the evidence is lacking to prove that this is contra-indicated and that no special after care is necessary (provided the INR is in the required therapeutic range and not at levels of 15!)

Immunosenescence – the waning of immunity in the elderly – provided much food for thought. The efficacy of vaccines in the elderly does diminish and further development of vaccines is required to ensure a better response in the elderly. An example is hepatitis A vaccine, which in the younger traveller produces an excellent immune response – in the elderly traveller who will be visiting a country of high hepatitis A endemicity it is preferable to use immunoglobulin to the hepatitis A vaccine.

At the end of it all, perhaps it is safer for dogs to travel.....

Dr Garth Brink, SASTM

Important News for FIDSSA Members - Lea Lourens, FIDSSA Administrator

fidssa federation of infectious diseases societies of southern africa

Thank you to all the members who have renewed their membership. We do have a few payments without references which we cannot trace. Please make sure that we did receive your proof of payment and that you are able to login to the website. If not please send me a e-mail so that we can rectify the problem.

As wonderful as technology can be, it can also cause a lot of headaches and we do from time to time experience some system errors. We do apologize and thank you in advance for any inconvenience it may cause. If you are experiencing some problems with login in or not receiving your emails, please send me a email at info@fidssa.co.za so that we can assist you ASAP.

Just a reminder: PLEASE check your personal detail on the website. Information such as address and contact numbers. With the conference just around the corner we don't want you to miss out on important information. We hope to see you all in October!

Mycoplasma genitalium as a cause of vaginal discharge and its relationship with HIV

Mycoplasma genitalium is a major cause of non-chlamydial non-gonococcal urethritis (NGU) in men and is associated with cervicitis, endometritis and pelvic inflammatory disease in women [1, 2]. Like *Chlamydia trachomatis*, infection in women is often asymptomatic[3].*M. genitalium* infection is common among HIV infected individuals, but the role of *M. genitalium* in these individuals is still unknown. However, other studies elsewhere though inconclusive, have indicated to a lesser extent the associations of *Mycoplasma genitalium* with PID, Ectopic pregnancy and adverse birth outcome[4]. In order to establish an evidence base of the impact of emerging bacterial sexually transmitted infections, we undertook a study the aim of which was to determine the prevalence of *M. genitalium* infection in HIV infected individuals as compared to HIV uninfected individuals.

Specimens were collected from consecutive consenting participants attending an STI clinic as part of microbiological surveillance activities. Over a six year period (2007 – 2012), a total of 1,219 participants with male urethritis syndrome (MUS) and 1,236 participants with vaginal discharge syndrome (VDS) were recruited. Urine from MUS participants and an endocervical swab from VDS participants were collected for testing for *M. genitalium* using a polymerase chain reaction assay. All participants provided blood for HIV screening.

Between 2007-2012 the range of *M. genitalium* infection varied from 8.4% - 14.3% in MUS participants and 10.1% - 11.1% in VDS participants. Although there was no clear trends in *M. genitalium* prevalence by year, *M. genitalium* was significantly associated with HIV co-infection in VDS participants (p=0.004). There was no such association between *M. genitalium* and HIV in MUS participants (p=0.782).

The high prevalence of *M. genitalium,* and its association with HIV co-infection among VDS participants, highlights the need for further studies to understand the association between the two infections. Within South Africa, STI patients are managed using the syndromic management approach in accordance with WHO recommendations. The dose of doxycycline and other antibiotics usually given as part of the syndromic treatment of nongonococcal urethritis, cervicitis, or pelvic inflammatory diseases were found to be clinically effective but did not eradicate *M. genitalium.* More information is needed on the potential role of *M. genitalium* in the transmission and acquisition of HIV in order to decide whether the treatment of *M. genitalium* should be incorporated into existing syndromic management

References:

1. Gambini D, Decleva I, Lupica I et al. *Mycoplasma genitalium* in patients with non-gonococcal urethritis: prevalence and clinical efficacy of eradication. *Sex Transm Dis* 2000; **27**: 226-9.

2. Korte JE, Baseman JB, Cagle MP et al. Cevicitis and genitourinary symptoms in women culture positive for *Mycoplasma genitalium. Am J Immunol* 2006; **55**: 265-75

3. Falk L, Fredlund H, Jensen JS. Signs and symptoms of urethritis and cervicitis among women with and without *Mycoplasma genitalium* or *Chlamydia trachomatis* infection. *Sex Transm Infect* 2005; **81**: 73-78.
Manhart LE, Broad JM, Golden MR. Mycoplasma pathogenicity and treatment. *CID* 2011; **53**: 129-142.

4. Bradshaw CS, Jensen JS, Tabrizi SN et al. Azithromycin failure in Mycoplasma genitalium urethritis. *Emerg Infect Dis* 2006; **12**: 1149-1152.

Precious Magooa, NICD/NHLS

South African Society of Clinical Microbiology antimicrobial resistance surveillance workshop

A SASCM antimicrobial resistance surveillance workshop was held in March this year. Presentations and discussions centred around current issues of concern. Highlighted below are the main points arising from the discussion.

Ethics of data dissemination – one of the key functions of SASCM is the collation of local susceptibility data. How best and to whom to disseminate this data to was further discussed. Computer tools for reporting susceptibility data such as ICNet and WhoNet were also considered.

Eucast vs CLSI – many laboratories are guided by CLSI recommendations. These guidelines are costly and often lag behind with breakpoint changes. Strong support was given to reviewing the advantages/benfits of Eucast guidelines with a view to changing practice in South Africa.

Update on antifungal breakpoints – changes in these breakpoints, introduced initially by Eucast and then CLSI, raise increasing therapeutic dilemmas.

Antimicrobial susceptibility data collection – changes in collection and reporting need to be introduced in order to track resistance in newer antimicrobial agents, CRE's, standardisation of reporting of certain resistance mechanisms, in particular ESBLs and ampCs and a more detailed reporting on bloodstream fungal infections are required.

Emerging infections – the current status and diagnostic methods for *Clostridium difficile* and carbapenem resistant enterobacteriaceae were discussed.

A number of working groups were established to take forth the different issues:

- EUCAST group
- Surveillance reporting group
- CRE group

In addition, the group recognised the need to improve the rapid reporting and dissemination of information about multi-resistant pathogens, such as CRE and VRE. It was decided that:

- SASCM should advocate for reporting of multi-resistant pathogens to be made mandatory.
- SASCM to establish a web-based real time voluntary reporting system covering both private and public sector labs.

An update from all groups will be delivered at the next meeting in October.

2013 FIDSSA-GlaxoSmithKline Research Fellowships - applications open

A request for applications for the 2013 FIDSSA-GlaxoSmithKline research fellowships has been posted on the FIDSSA website homepage (http://www.fidssa.co.za) where an application form can also be found. Projects of up to R100,000 will be offered to successful applicants, whose projects relate to clinical, laboratory or public health aspects of infectious diseases in its broadest sense. The closing date for applications is **Wednesday 31st July,** with no extensions granted.

23rd ECCMID Berlin, Germany 27–30 April 2013

ESCMID EUROPEAN SOCIETY OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES

The 23rd ECCMID conference was held in Berlin from 27 – 30 April 2013. ECCMID is a massive conference with 8 parallel sessions running from before 8am until 6pm every day with approximately 2000 poster presentations and over 6000 delegates. A small number of South African microbiologists were fortunate enough to attend this year's conference and gave their opinions on the highlights of the event, as well as lessons learned:

I think the highlight was the session on EUCAST. I am contemplating moving over from CLSI to EUCAST as there are several advantages in terms of cost, ease of access via internet, breakpoints for several organisms not covered by CLSI, MIC distributions, epidemiological cut-offs, etc.

Lecture by Didier Raoult on culturomics- message that despite the rapid molecular advancement of micro (metagenomics) and the move to automation, culture still remains a vital tool and should not be ignored.

Lecture by Diarmaid Hughes on the fitness costs of antibiotic resistance in bacteria. This field is not well understood and our ability to measure this is currently still quite rudimentary. There are however certainly relationships between the two and current evidence suggests that many bacteria do select the path of low-cost fitness mutations.

The DALI study, a multicenter ICU study looking at antibiotic levels in critically ill patients. Key message we are not achieving adequate levels of some drugs (notably B-lactams) in more than 50% of patients. This paves the way for more intensive research into methods of optimizing antimicrobial therapy.

The absolute explosion in carbapenem resistant Enterobacteriaceae, which are now being reported in increasing numbers globally, with a number of countries in Europe now having an endemic situation where most hospitals in the country are repeatedly seeing cases admitted from autochthonous sources.

The widespread adoption of MALDI-TOF for identification of micro-organisms, with the advantages of speed, accuracy and very cheap consumables

Their conclusion: Overall a great conference, a cosmopolitan city and the knowledge that the field of micro remains as exciting as ever! And many of the presentations, abstracts and posters from ECCMID are available on the conference website http://www.escmid.org/escmid_library/online_lecture_library.

What role for oral metronidazole in the treatment of *C. difficile*?

Metronidazole is one of 3 drugs licensed for the treatment of *Clostridium difficile* (*C. difficile*) associated diarrhoea (CDAD). The other 2 are oral Vancomycin and Fidaxomicin, which is not yet registered in South Africa. Oral Metronidazole is absorbed in the upper GI tract and re-secreted into the colonic lumen through inflamed mucosa. Hence, the concentration of metronidazole achieved at the luminal side of the colon is dependent on the degree of inflammation. For this reason, efficacy of oral metronidazole for CDAD is variable.

Pooled data from a multicentre RCT of oral Metronidazole versus Vancomycin showed a clinical success rate of 72.7% for metronidazole compared to 81.1% for Vancomycin (OR 1.68, 95% CI 1.114-2.537). Rates of recurrence for both were equivalent at approximately 20%. Generally, 25% of patients with a first episode of CDAD will have a recurrence, and of those, 45-65% will have further recurrences.

Most international guidelines advise metronidazole 400mg po tds for 10-14 days in the treatment of 1st episode of mild-moderate CDAD. In contrast, severe CDAD as defined by *Clostridium difficile* infection (CDI) with either a white blood cell count (WBC) > $15x10^9$/L, rising creatinine and/or signs and symptoms of severe colitis, is treated with oral vancomycin 125mg po qds 10-14 days. Anecdotally, most prescribers seem to start with oral metronidazole independent of the severity of CDAD and only progress to oral vancomycin, when resolution is slow. More care is needed in categorizing severe CDAD and the use of vancomycin optimized.

Diarrhoea should resolve within 1-2 weeks and symptoms not improving or worsening should not normally be considered as treatment failure until after 7 days. In patients on oral vancomycin whose condition deteriorates, intravenous metronidazole should be added.

Non-inferiority studies of oral Fidaxomicin, a novel macrocyclic antibiotic, compared to vancomycin demonstrated cure rates of 88-92% at 30-day follow-up. The advantage of Fidaxomicin is a 50% reduction in relapse rates (12-15%). Fidaxomicin is the treatment of choice for recurrent CDI in new guidelines from Public Health England.

References

Johnson et al. ID Week 2012, San Diego, USA 818
Bauer MP et al. Clin Microbiol Infect 2009;15:1067-79
Cornely O. Fidaxomicin and other antibiotic strategies. 23rd ECCMID 2013, Berlin, Germany . S315.

Local Conferences 2013-2014

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There are a number of important upcoming ID-related conferences in South Africa over the next 12 months, links to which are on the FIDSSA website conferences page (http://www.fidssa.co.za/B_events.asp). The EMBO-Workshop on AIDS-related mycoses in July 2013 brings together the world's leading researchers dealing with AIDS-related mycoses. Registration is limited to 100 participants.

Options for Control of Influenza is the leading international Influenza conference and will take place in Cape Town in September. From basic research to public health policy, this conference is the premier event for all fields of influenza. A special feature cornerstone session on the animal-human interface will be convened as will sessions on H7N9 and ethics and politics of Influenza.

Approximately 2000 Pediatric and Infectious Disease specialists are expected at the 8th World Congress on Pediatric Infectious Diseases in Cape Town in November 2013. With President of WSPID, Shabir Madhi and Brian Eley both on the international scientific committee and a strong South African LOC, this is certain to be an exciting and vibrant conference.

Lastly, the scientific programme is taking shape for the 16th International Conference on Infectious Diseases in Cape Town, April 2014. As the hosts of the conference, FIDSSA and the LOC are intimately involved in developing the programme and social events for the conference. A great line up of plenary speakers is already in place, including our own Salim Abdool Karim.

Details of how to register for all these conferences and more can be found through the conference links.