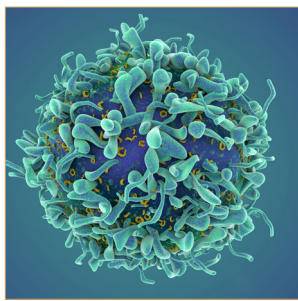
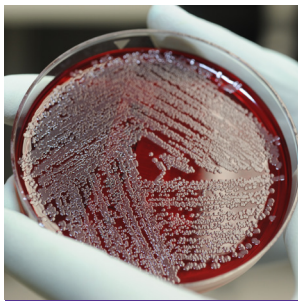


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Keynote Forum  
November 11, 2019

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***Infectious Disease 2019***  
***Europathology 2019***



Joint Event  
International Conference on  
**Pathology and Infectious Diseases**  
&  
3<sup>rd</sup> International Conference on  
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## **Pisespong Patamasucon**

*Rocky Mountain Hospital for Children, USA*

### **Fatal case of non-culturable Meningitis with Pulmonary Embolism**

A 16 year old female presented to Emergency Department with complaint of a severe headache for 3 days, vomiting, and a low grade fever. She had previously been diagnosed 3 weeks earlier with Epstein - Barr virus and was currently taking oral prednisolone. The work up in the ED found an increase intracranial pressure up to 50cm H<sub>2</sub>O with CSF WBC of 3661 with 96% PMN, very low glucose at < 5 mg/dl and high protein at 429 mg/dl which is compatible with bacterial meningitis. The chest x-ray showed suspicion of pulmonary emboli. Antibiotics initially given in the Emergency room were ceftriaxone and vancomycin. She was also intubated and put on respiratory support. Metronidazole was added on day 2 of admission.


The blood, urine, and CSF all showed no growth on culture and the meningo-encephalitis panel PCR was negative for usual bacterial viruses and fungal pathogens. A bacterial PCR collected from the bronchial lavage was sent out to find the actual causative agent. A subsequent CT scan with contrast of the neck found an internal jugular vein thrombosis. After six

days of admission, she developed severe brain swelling and herniated, no further intervention was done as requested by her mother and she expired on that day.

#### **Speaker Biography**

Pisespong Patamasucon, M.D. is the Director of Pediatric Infectious Diseases at Rocky Mountain Hospital for Children. Previously the Director of Pediatric Infectious Diseases and Professor of Pediatrics at the University of Nevada School of Medicine. He studied at the Chiang Mai University in Thailand before completing pediatric residencies at the Children's Hospital in Bangkok, Thailand, and Georgetown University in Washington D.C. Following his Georgetown residency, he has completed a fellowship at the University of Texas South Western Medical School in Dallas. Prior to his roles at the University of Nevada School of Medicine, he was the Director of Pediatric Infectious Diseases and Director of the International Health Program at the University of Tennessee Medical Center at Knoxville. While at the University of Tennessee, Dr. Patamasucon established and oversaw an exchange program between the university's medical program and schools and teaching hospitals in Thailand.

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## *Sidharth Sonthalia*

*SKINNOCENCE: The Skin Clinic and Research Centre, India*

### **THE AZOLE MENACE: The dark side of azoles revealed**

**Background:** The Epidemic of antifungal therapeutic failures against superficial mycotic infections, especially dermatophytosis is expanding at a rapid pace across South Asia and beyond. Although the abuse of topical steroids, inadequate dose/duration of therapy, and ignorance of other important epidemiological and personal factors are contributory, perhaps the strongest reason is the AZOLE MENACE, relatively unknown and ill-understood phenomenon. In this lecture, I shall dwell upon objectively on how the indiscriminate use of azoles, in particular, oral itraconazole is responsible for this regional epidemic that is threatening to become a pandemic lest urgent rectification is undertaken.

**Unknown Facts Revealed:** In this lecture some of the many azole-related issues will be revealed with evidence-backed data.

- Patients with tinea visiting a dermatologist are not naive, rather polypharmacy-abused in more than 90% cases, having received multiple antifungals especially oral itraconazole/topical azoles.
- Oral itraconazole is often injudiciously prescribed by primary care physicians in an inadequate dose/ duration or as multiple intermittent/ prolonged courses.

The bioavailability/ serum levels of itraconazole are influenced by at least 15+ inconsistent factors

- Around 54.3% Indians above the age of 45 years are on antacid medications like PPI's, resulting in reduced bioavailability of itraconazole when co-administered. The effects of longer acting PPI's like esomeprazole may persist up to 4-5 days.
- Dependent on intake post meals and the effect of aerated drinks.
- Serum levels affected by drug brand and pellet size.
- The sub-inhibitory concentrations of itraconazole achieved in patient's serum significantly increase the likelihood of

secondary azole resistance by selection pressure, since azoles being fungistatic allow persistence of organisms.

- The selection pressure-induced secondary resistance resulting from oral itraconazole is also seen to perpetuate pan-triazole and partial terbinafine and amorolfine resistance. Ciclopirox olamine is the only drug without a propensity to develop resistance.
- Itraconazole-resistant strains show high levels of cross-resistance to multiple triazoles including voriconazole and posaconazole, and often to six triazole fungicides used extensively in agriculture, qualifying for multi-triazole resistance).
- Azole-resistant fungi are more virulent because of the differences in cell wall composition, increased filamentation and adherence, and enhanced biofilm formation. Once acquired, resistance is maintained even in the absence of drug.
- Primary azole resistance due to their widespread use as agricultural fungicides, further adds to the azole menace. This phenomenon, which started from the Netherlands and rapidly engulfed majority of the European Union, has now reached the shores of the Indian Ocean. As per the statistics available from the website of Indian Ministry of Agriculture, in the 4-year period from 2012 to 2016, there was an estimated 29.5% decrease and 34.2% increase in the consumption of insecticides and fungicides respectively.
- The spreading azole resistance in superficial fungal infections resulting in selection of a population of mutants that don't respond to any drug is likely to have graver ramifications in invasive dermatophytosis in immunocompromised individuals.

**Practical Guidelines to contain & reverse the epidemic:**

- Majority of patients with complicated tinea (recurrent/relapsed/recalcitrant/chronic) who visit dermatologists have already taken multiple/prolonged courses of oral itraconazole, rendering them resistant to any further course of itraconazole; thus, they should not be given oral itraconazole.
- Resistance to terbinafine on the other hand, acquired through a rare mechanism, is infrequent, shows restoration of

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susceptibility after drug removal and has not been reported to confer cross-resistance to other antifungal agents.

- The dosing of oral TERBINAFINE should be as per body weight, 6mg/kg/day and it should be given for a duration of 8 (minimum) to 12 weeks (preferred), taking into consideration the dermatophytic involvement of vellus hair.
- For topical application, NO AZOLES should be used. Only three anti-fungals seem fit for topical use in current scenario – CICLOPIROX > TERBINAFINE > AMOROLFINE.
- Non-pharmaceutical means, such as low-dose UV-B therapy, LLLT, apple cider vinegar and other herbal substances capable of breaking the BIOFILM should be used as adjuvants.

### Speaker Biography

Sidharth Sonthalia is a Senior Consultant Dermatologist & Medical Director, SKINNOCENCE: The Skin Clinic & Research Center, Gurugram, India. He devotes his time equally to patients, active research (translational/clinical) and education of other Dermatologists and allied Specialists in novel and controversial subjects like Dermoscopy, Dermatopathology, Management of Resistant Fungal Infections, Psychodermatology PCOS etc., by organizing focused congresses and International Summits under the aegis of his initiative DermaSource India,. He has delivered more than 80 lectures as invited Guest Faculty at various International conferences organized by ASPCR, ICD, IPCC, CCD, WCD, WDC and DERMACONS. He is serving as the Founding Chair of the South Asian Alliance against Cutaneous Mycosis [SAARCUM], Secretary General of Asian Society of Pigment Cell research [ASPCR], Chief Founder & Secretary General of the Indian Society of Dermoscopy, Onychoscopy & Trichoscopy [ISODOT], He is a founding co-chair of the Afro-Asian Dermoscopy Group [AADG].

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## **Sujatha Siddappa**

*Institute of Nephro-Urology, India*

### **Andrology in general urology OPD with a perspective of urology complaints and its interphase with infertility**

**P**atients who come to our urology out-patient department and have been advised –semen analysis. The objective of this study was to expand upon the challenges faced. Semen sample analysis from the start which is advising for the test to sample collection at the laboratory. Then comes the interpretation with redefining the threshold of values and the constraints of interpretation. the intra individual variability and absolute prediction. Post script to this conversation is semen analysis is a gross estimate of male fertility but it is unfortunately best test we have at access as a on invasive access. The diagnosis of male infertility – the questions methodology, limitation of technical expertise and sub optimal values. So for the population as a whole it's like an organized ambulatory training. Education intervention has a unique comprehensive approach, broad range of ambulatory procedure with target group. Learning community, clinical skills, curriculum development and medical education. This is

the conversation we have to expand to convert this subject from monopoly to oligopoly.

#### **Speaker Biography**

Sujatha Siddappa has completed her MBBS, MD (pathology) diplomas in human resource, waste management, law and ethics, pain and palliative care MBA hospital management observer ship in renal and urologic pathology with 23years experience with several publications and citations. Academics researches includes, A case study of a current waste management practice, Patient with palliative care needs chronic renal failure, Current objective to have a holistic view of the patient the poor have been provided for in the form of free dialysis, drugs and transplantation under various schemes in the government this study is to emphasis the psychological burden of the patient which can be interpreted in the form of little things which a common man takes for granted for e.g. passing of urine, sleep patterns, A review of electrophoresis' patterns in urine, Part of inter observer study on diabetic nephropathy, Lupus scoring group of proliferative Glomerulonephritis, Artificial intelligence - urine sediment examination.

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