

NEWSLETTER APRIL – JUNE 2016



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MAKING LIVES SAFE

- CANDIDA AND CANDIDIASIS

- ENTEROCOCCUS GALLINARUM
ENDOCARDITIS, A MISSED INDICATION
FOR EARLY SURGICAL INTERVENTION?



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CANDIDA AND CANDIDIASIS

Dr. HAMID ZEB KHAN (DERMATOLOGIST)

Candida

Candidiasis is an infection caused by the natural residents of our body i.e. species of the genus *Candida* (almost 20), but predominantly *Candida albicans* is of importance in humans.

Candida albicans is a yeast that has the ability to grow in two different forms. It either shows budding or forms fragments called Hyphae with attached buds.

Candida albicans is a part of normal human flora of the mouth, skin and genitals. They can cause a broad range of infections if their number is increased. Infection can be either an acute mucocutaneous or an unusual invasive form. These infections are more common in patients having suppressed immune system e.g. in people with HIV/AIDS or under treatment for other diseases where immunosuppressive drugs are employed therapeutically. They also become invasive in immunologically incompetent individuals who genetically are immune deficient.

Types of Candidiasis

C. albicans can infect various parts of body like the mouth, skin, stomach, urinary tract and genitalia. Infection caused by *Candida* species can be of

three types principally:

- *Genital Candidiasis*
- *Peri-ungual Candidiasis*
- *Oropharyngeal/ Esophageal Candidiasis*
- *Invasive/ Mucocutaneous Candidiasis*

1. Genital Candidiasis:

Genital Candidiasis occurs when normal biological environment of vagina is altered or due to a variety of diseases or drugs taken for other conditions, and there are many other multifarious conditions, some biological and other pathological or iatrogenic causes that may alter the normal genital flora and makes conditions favorable for intensive candidal growth. This increased population may contribute to the organisms to become invasive.

Symptoms

Person with genital candidiasis may have rashes, burning or itching of genital organs.

2. Peri-ungual Candidiasis:

It is around and in the nail of women, principally those working in beauty parlours, kitchens and hand washing clothes i.e. who deal with water.

3. Oropharyngeal/Esophageal Candidiasis

Commonly, Oral Candidiasis or “Thrush” is the infection of mouth caused by *C. albicans*.

Symptoms

The major symptom that indicates Esophageal Candidiasis is the formation of plaques or white patches on the surface of tongue or other oral mucosal surfaces. Symptoms may include:

- *Soreness or redness in the infected areas.*
- *Pain or difficulty in swallowing.*
- *Fissures and redness at the corners of mouth.*

4. Invasive Candidiasis:

Under severe immune compromised conditions, *Candida* can cause serious infection by entering the Bloodstream and may cause infection of eyes, bones brain and heart called Invasive Candidiasis.

Symptoms

The symptoms pertain to the systemic organ involvement.

Candidemia

Candidemia is a type of Invasive Candidiasis, in which *Candida* invades into the blood and cause infection. This infection is very severe, mostly lethal, and accounts for about 50 to 70% of all deep infections.

Diagnosis

Microscopic examination or/and culture is done in combination with clinical findings. Positive culture alone doesn't indicate infection as *Candida* is commonly present on our skin as a normal flora. Clinical symptoms must be considered to arrive at a plausible clinical diagnosis. Culture and tissue Biopsy is done to confirm the cause of infection.

Prevention

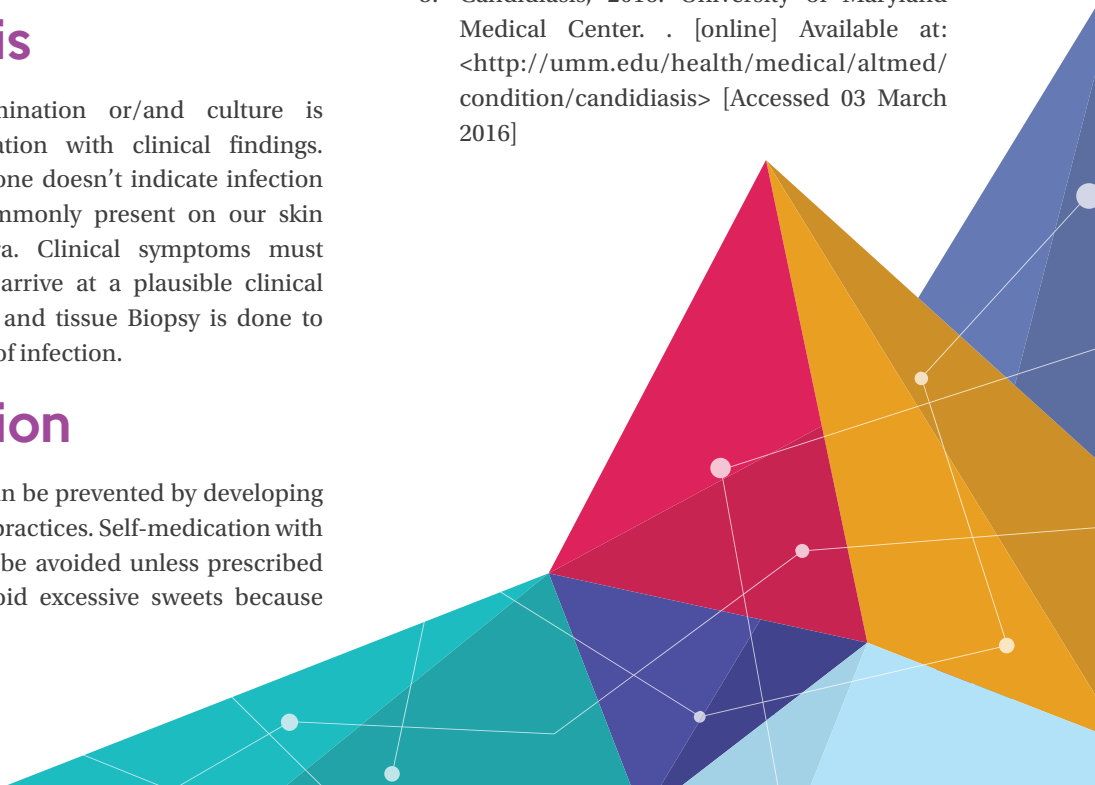
Oral candidiasis can be prevented by developing good oral hygiene practices. Self-medication with antibiotics should be avoided unless prescribed by the doctor. Avoid excessive sweets because

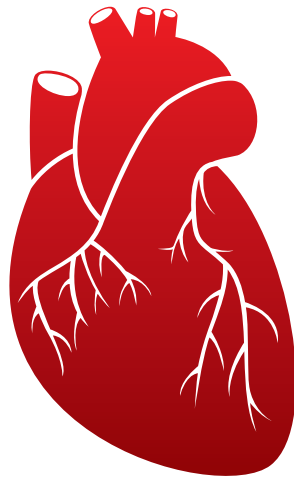
high blood sugar level promotes the growth of *Candida*, as does Diabetes Mellitus. Candidiasis can also be controlled by keeping skin dry and cool as moist surfaces are favorable for growth of yeast. Yeast infections can be prevented by good health and hygiene practices.

Alternative medicines also promote the use of plant extracts to reduce the number of *Candida*.

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ENTEROCOCCUS GALLINARUM ENDOCARDITIS

A Missed Indication for Early
Surgical Intervention?

FIRST & CORRESPONDING AUTHOR

Dr. MOHAMMAD AKRAM (CARDIOLOGIST)

Introduction:

Enterococcus gallinarum is very rare causative agent of endocarditis. We present a case of E. Gallinarum endocarditis in which the underlying mitral valve prolapse and the gastrointestinal source of infection were identified. Annular skin eruption with typical characteristics of erythema marginatum was noticed although it is not reported to be part of the classic criteria of infective endocarditis.

Case study:

A 59-year-old male presented with fever, shortness of breath and weight loss. He gave a history of surgical operation for hemorrhoids complicated by a wound infection one month prior to presentation. The patient was tachycardic and febrile (38.8°C). Cardiac examination revealed a loud first heart sound and an apical pan systolic murmur, but there were no signs of heart failure. Red, painless annular skin eruptions were noted on the extensor surfaces of both upper and lower limbs (Figure. 1).

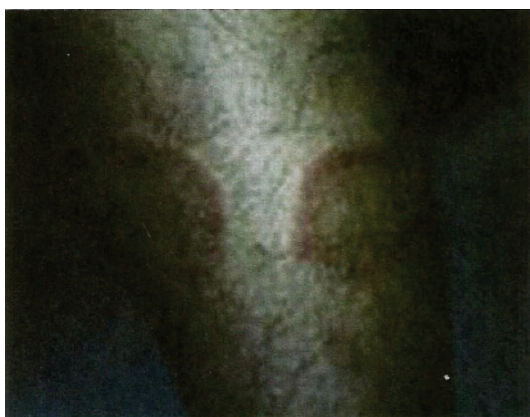


Figure 1: Skin Lesion

The erythematous areas showed the typical characteristics of evanescent, slightly raised macules of erythema marginatum with sharply demarcated irregular border and pale centers.

The full blood count showed leukocytosis (neutrophilia) and anemia (HB 9.27 gm/dl). CRP and ESR were elevated whereas kidney function tests were normal. An ECG showed sinus tachycardia and no conduction block.

Trans-thoracic echocardiography revealed mitral value prolapse and freely mobile mass attached to the posterior mitral leaflet suggestive of vegetations. Findings were confirmed with Trans-esophageal echocardiography (figure. 2) the largest vegetation measuring 13-14 mm. Five sets of blood cultures drawn over 30 minutes from separate venipuncture were all positive for *Enterococcus gallinarum* sensitive to amoxicillin, ampicillin, augmentin, meropenem, ofloxacin, penicillin, ciprofloxacin, erythromycin, tetracycline and vancomycin.

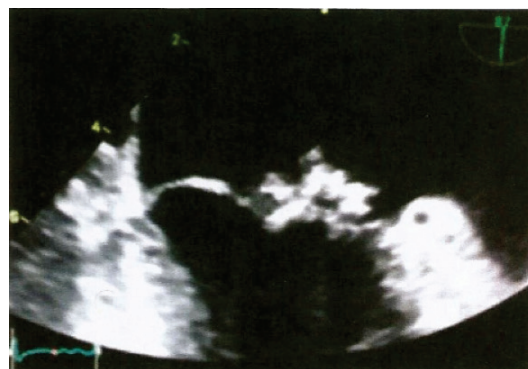


Figure 2: TOE images with mitral vegetations clearly evident

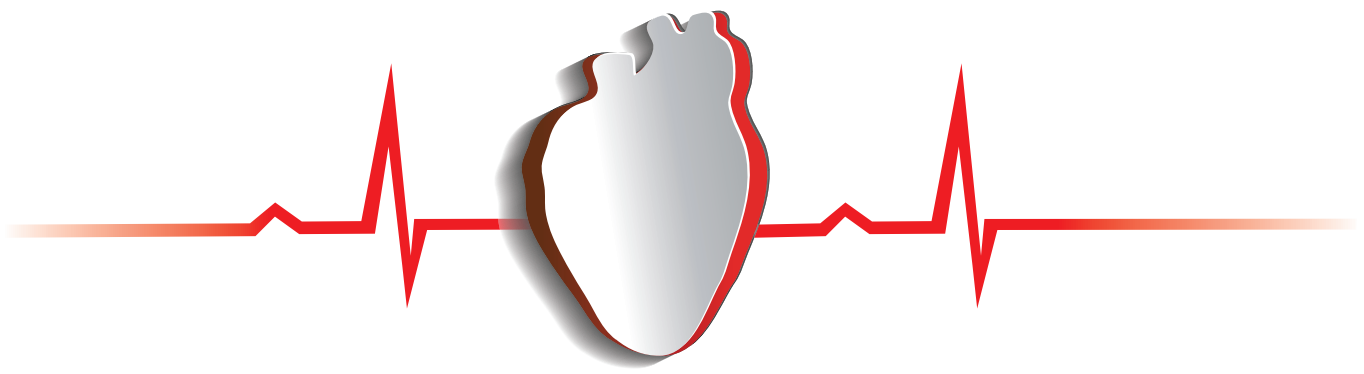
The patient was started initially on intravenous Ticoplanin and Augmentin. Nevertheless, the patient started to have elevated liver enzymes, likely be due to Augmentin. The antibiotics were changed to intravenous Ampicillin and Ceftriaxone. Liver function improved, however the clinical and laboratory response to treatment was not satisfactory. Eventually, the patient underwent successful surgical mitral valve replacement.

Discussion:

Enterococci are part of the normal intestinal flora of humans and animals but are also important pathogens responsible for serious infectious. The importance of enterococcal infection is their increased recognition in terms of nosocomial infections.

Of the 20 enterococcal species described to date, *Enterococcus faecalis* and *E. faecium* represent the majority of clinical isolates belonging to this genus. Motile Enterococci including *E.gallinarum*





and *E. casseliflavus/flavescens* are responsible for only 1-2% of all cases of Enterococcal bacteremia.

Although motile Enterococci were described 6 decades ago, criteria for the classification of *E. gallinarum* were described only recently. Therefore, clinical experience with such strains has been limited.

A MEDLINE search revealed that only three cases of *E. gallinarum* endocarditis have been reported in the literature, two of them being cured with antibiotics plus valve replacement.

Of the 252,266 blood cultures performed at the Mayo Clinic from 1992 through 1998, there was only singly case of *E.gallinarum* endocarditis in a 66-year old man with a bicuspid aortic valve who had undergone a radical prostatectomy with bilateral ureteroileostomies 2 years earlier. He was cured with aortic valve replacement and administration of IV penicillin and gentamicin.

The majority of cases of bacteremia due to motile enterococci involved patients with underlying conditions, such as renal failure, solid or hematologic malignancy, and diabetes mellitus; none of these conditions were evident in our case.

Most of the patients with enterococcus related disease have a presumptive gastrointestinal source of the bacteria. In our case, the gastrointestinal source of bacteria was obviously related to the recent history of complicated haemorrhoidectomy.

Interestingly, our patient developed a skin lesion typical of erythema marginatum in that painless evanescent, erythematous and slightly raised macules with a sharply demarcated and irregular border and pale centre. This skin lesion is seen in early stages of rheumatic fever, but has never been described in infective endocarditis. However, it

is a non-specific phenomenon and is also seen in conditions like allergic drug reactions, sepsis and glomerulonephritis. In our case, it was not clear whether this skin lesion was *E. gallinarum* infection related or related to a drug reaction or sepsis. However, it is noteworthy that the skin lesion disappeared shortly after starting the antibiotic treatment.

Despite the fact that antibiotic susceptibility patterns indicate the most isolates of motile enterococci are ampicillin susceptible, failure of medical treatment is not uncommon. This is probably because, in comparison with streptococci that usually are killed by ampicillin, enterococci are inhibited but not killed. Killing of susceptible strains of enterococci requires the synergistic action of penicillin, ampicillin, or vancomycin in combination with either gentamicin or streptomycin. This might explain the need for a surgical approach in our case despite the results of the sensitivity tests, which indicated that the isolated organism was sensitive to ampicillin.

Conclusion:

E. gallinarum isolates are becoming more notable and not limited to patients who are immunocompromised. Our patient was cured with antibiotics plus valve replacement similar to three previously reported cases. Clinicians should be warned that *E. gallinarum* might not respond to antimicrobial therapy despite in vitro results that indicate antimicrobial susceptibility. Our case and the few other reported cases of *E. gallinarum* might be a missed indication for early cardiac surgery intervention in infective endocarditis.

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UNITE TO → END TB

Live life to the fullest: World Tuberculosis Day, 2016

The global epidemic of tuberculosis affects nearly 9 million annually, out of which nearly 3 million do not receive adequate medical assistance. Kulsum International Hospital observed World TB Day to raise awareness of this dire problem with the theme “Live life to the Fullest”. On this day, Dr. Shazli Manzoor (Pulmonologist, Intensivist & Medical Director KIH) spoke about the prevention and treatment of this contagious disease. TB is the 7th biggest life taking disease in Pakistan and if appropriate steps are not taken, this will get 4th position, he added. He also appreciated the initiatives and efforts of National TB Control Program to eradicate this fatal disease.

Physical manifestations of anxiety and depression- A challenge for healthcare professionals



At workplace, anxiety and depression may negatively affects the task performance, thinking process, emotions, work relationships and importantly physical health. KIH considers its every employee an asset. A workshop with the theme “Physical manifestations of anxiety and depression- A challenge for healthcare professionals” was organized for KIH employees by Dr. Nadeem Rehman (Consultant Gastroenterology, KIH) and Dr. Shakil Malik

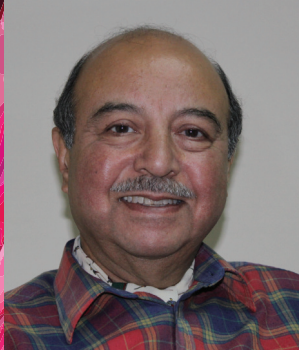
(Senior Clinical Director & Consultant Psychiatrist, Sussex Partnership NHS Foundation & Teaching Trust; Senior Lecturer, King’s College London). Objective of this session was to create awareness about the prevalence and manifestation of anxiety and depression. It will be followed by a series of workshops with the aim to develop coping strategies and prevent burnout in health care professionals.



Early detection of the Breast Cancer is the best protection

Breast Cancer awareness workshop was conducted by Dr. Shaukat Durrani (Consultant – Oncoplastic Breast Reconstruction Surgeon) at Kulsum International Hospital on March 26th, 2016. Message of the day was “Early Detection is the best protection”. An interactive session was arranged to teach female staff how to perform self-breast examination. Dr. Shaukat highlighted the importance of early detection of breast cancer which could save thousands of lives. According to him, Pakistan has the highest incidence of breast cancer in Asia where 40,000 women die each year and out of those 70% are presented with advance stage, when chances of five years survival are only 10% - 15%.

New Consultants



Dr. Hamid Zeb Khan

Dr. Hamid Zeb Khan is a consultant with decades of experience in dermatology. He completed his MBBS from Nishtar Medical College in 1973. Afterwards he did DTM&H (Diploma in Tropical Medicine & Hygiene) from Conjoint Board of Royal College of Physicians & Royal College of Surgeons in 1976, Masters in Clinical Medicine from University of London in 1978 and D - Dermatology from St. John's Hospital for Diseases of Skin (London).



Dr. Miraj Us Siraj

Dr. Miraj Us Siraj is a senior consultant Neurosurgeon. He graduated from Rawalpindi Medical College in 1987 and attained fellowship from Royal College of Physicians & Surgeons of Glasgow in 1995. He also received Neurosurgery trainings from different hospitals of United Kingdom. He served in different institutions of United Kingdom, Saudi Arabia and Pakistan at senior positions. Currently, he is a Professor of Neurosurgery at Yusra Medical and Dental College, Islamabad.



Dr. Shahab Saidullah

Dr. Shahab Saidullah is a consultant Cardiologist with experience in Cardiac Electronic Devices and Arrhythmia treatment. He is MBBS (Gold Medalist), FCPS Cardiology, Fellow in Clinical Cardiac Electrophysiology and Member of Pakistan Heart Rhythm Society. He is managing the Device and Arrhythmic Clinic at KIH to make it center of excellence.



Dr. Huma Saifullah Khan

Dr. Huma Saifullah (FCPS Histopathology) joins Kulsum International Hospital as a consultant Histopathologist. Histopathology department majorly covers Gynaecological and Non-Gynaecological Cytology reporting, Fine Needle Aspiration and Immunohistochemistry.





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