Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
as an opportunistic pathogen, with only a handful of cases seen in immuno-compromised individuals. In this study, we would like to report a rare case of R. planticola pneumonia in an immunocompetent individual without any known risk factors or possible exposure

https://doi.org/10.1016/j.ijmmb.2021.08.139

SEROPREVALENCE OF LEPTOSPIRA IN AES CASES IN A TERTIARY CARE HOSPITAL IN SOUTH EAST ASSAM

Begum Sultanah Shahnaj Ahmed, Shubhrendu Sekhar Sen. Silchar Medical College & Hospital

Background: Acute encephalitis syndrome (AES) is caused by a wide range of viruses and bacteria. Japanese encephalitis (JE) is considered as a main viral etiology of patients with AES in Assam. Leptospirosis is a zoonosis which in its milder form resembles any other viral illness and in its severe form needs to be differentiated from other common infection in tropical regions of India. Most cases of human leptospirosis worldwide have been attributed to rodents. Human leptospiral infection primarily results from direct or indirect exposure to the urine of infected animals. Clinical presentation generally include fever, altered sensorium, hepatic and renal dysfunction.

Method: A prospective cross sectional study was conducted for 1 year from March 2019 to February 2020 in a tertiary care hospital. A total of 100 cases, which were tested sero-negative for Japanese encephalitis were tested by IgM cap-ture ELISA for Leptospira specific IgM.

Results: Among the 100 patients, 39 (39%) were found to be positive for Leptospira

Conclusions: The present study reveals leptospira as an aetiology of AES in Southeast Assam, India. If the patient is not treated for the severe form within 2-3 days after the onset of illness, it may progress in severity and sometimes be fatal

https://doi.org/10.1016/j.ijmmb.2021.08.136

Abstracts-Bacteriology

PREVALENCE OF GONOCOCCAL URETHRITIS IN MALE PATIENTS ATTENDING OUTPATIENT DEPARTMENT AT A TERTIARY CARE HOSPITAL

Sampurna Borbora, Subhrenudu Sekhar Sen. Silchar Medical College

Background: Gonorrhoea is one of the commonest sexually transmitted infection. The causative agent of gonococcal urethritis is Neisseria gonorrhoeae. It is highly prevalent in developing countries. Symptoms include urethral discharge, itching and dysuria.

Method: A cross sectional study was conducted including 54 subjects. Two urethral swabs were collected from each subject and tested with Gram's stain and culture. Informed consent was taken and data was collected using self-administered questionnaire.

Results: Among the 54 males studied, 3 (5.5%) were found positive for N. gonorrhoeae. Gram's stain was found superior to culture for detection of the organism.

Conclusions: Gonococcal infection is not uncommon in our setup. There is need for increased emphasis on gonorrhoeal infection screening for detection among asymptomatic patients. Nucleic Acid Amplification Techniques should be implemented for higher detection rate.

https://doi.org/10.1016/j.ijmmb.2021.08.137

A CASE VIGNETTE OF MELIOIDOSIS PNEUMONIA AS COVID MIMIC: ROLE OF MICROBIOLOGY LABORATORY IN ACCURATE DIAGNOSIS

Bijayini Behera, Shehnaz Firdaus, Gayatree Nayak, Anjuna Radhakrishnan, Rajesh Kumar, Bailajyantimala Mishra, Ashoka Mahapatra. All India Institute of Medical Sciences, Bhubaneswar

Background: During the ongoing COVID19 pandemic period, any new cases of acute-onset respiratory illness are likely to be treated as suspected COVID-19 by default.

Method: A 42-year-old lady was admitted with a 4-week history of fever and cough, followed by a 4-days history of increasing shortness of breath. Fever was intermittent, high grade and was associated with chills and rigor. The patient had a history of uncontrolled type II diabetes mellitus and on admission HbA1C was 15.5%. On examination she had a temperature of 102°F, blood pressure (BP) of 101/67 mm Hg, heart rate of 130 beats per minute, respiratory rate (RR) of 24 breaths per minute and O2 saturations of 92% in room air. On respiratory examination, there were crackles in the left infrascapular and infraaxillary area. The patient was admitted in the COVID suspect ward with an impression of moderate COVID-19 infection and nasopharyngeal swab was sent for SARS-CoV-2 on RT-PCR. The patient underwent a CECT scan of thorax, abdomen and pelvis that revealed consolidation in bilateral lung fields with a cavity in lingular lobe with presence of air-fluid level. Mediastinal and hilar lymphadenopathy were present.

https://doi.org/10.1016/j.ijmmb.2021.08.138

A FATAL CASE OF SEPSIS DUE TO LINEZOLID RESISTANT STAPHYLOCOCCUS HAEMOLYTICS

Das Padma, Padhi Abhishek, Gaikwad Ujjwala, Negi Sanjay, Bhargavya Anudita. AIIMS Raipur

Background: Over the years Staphylococcus haemolyticus has emerged as a major cause of health care associated blood stream infection. Identification of Staphylococcus haemolyticus is important because they are resistant to multiple anti-biotics. Incidences of linezolid resistance are being reported and it becomes important to understand the emerging epidemiology of Linezolid resistant Staphylococcus haemolyticus.

Method: A 41 year old female presented to the medicine emergency with the chief complaints of shortness of breath, cough, and cold and decreased urination. The patient was empirically started with piperacillin – tazobactam. The paired blood culture bottles flagged positive after 1.39 days of aerobic incubation. Initial gram stain from both the culture positive bottles revealed gram positive cocci arranged in clusters and the findings were immediately intimated to the treating physician.

Results: Causative agent was identified as Staphylococcus haemolyticus by VITEK MS ID AST 2.0 and correlated biochemically. Deranged SOFA score along with corroborative findings such as raised procalcitonin and CRP were suggestive of sepsis. The vitals of the patient deteriorated rapidly and she died due to respiratory distress, multiple organ dysfunction and disseminated intravascular coagulation. The strain was a multidrug resistant pathogen resistant to Penicillin, Erythromycin, Clindamycin, Cotrimoxazole, Gentamicin, Oxacillin and Linezolid with sensitivity only to vancomycin (MIC 1 μg/ ml).

Conclusions: Changing patient populations (increased numbers of premature new born and elderly), multi-morbid, chronically ill, and, often, immune-compromised patients and increasing use of invasive devices have predisposed to infections caused by Staphylococcus haemolyticus. Antibiotic intervention for Staphylococcus haemolyticus infection is challenging due to evolving multidrug resistant strains and increasing numbers of isolates with less susceptibility to reserve antibiotics. A close observation of changing epidemiology of Staphylococcus haemolyticus requires attention with special focus on cryptic changes in MIC of reserve antibiotics. Continued surveillance may help us in designing the anti-biotic therapy in gram positive sepsis according to their sensitivity.
Background: Acinetobacter baumannii has emerged as a multidrug resistant pathogen with high mortality as compared to non-baumannii species especially in hospital settings. However, identification of Acinetobacter up to the species level is complicated. Clear differentiation among various Acinetobacter species using standard biochemical methods is challenging. Commercial VITEK 2 compact system is an alternative for identification up to species level. Molecular detection of bla OXA-51 (intrinsic to A. baumannii) has been found as a simple, rapid method for identification. In this study we intend to compare the performance of conventional phenotypic & automated VITEK 2 compact system with that of molecular detection of bla OXA 51 to identify A. baumannii.

Methods: A total of non-repetitive 78 bacterial isolates presumptively identified as Acinetobacter spp. from routine clinical samples were further subjected up to species level as per modified Bouvet and Grimont phenotypic system, VITEK 2 compact system & OXA 51 detection by PCR.

Results: Out of 78 isolates, 75 were phenotypically identified as Acinetobacter baumannii by Bouvet and Grimont phenotypic system, VITEK 2 compact system & OXA 51 detection by PCR. Sensitivity, specificity, NPV & PPV for VITEK 2 compact system was calculated as 100%, 80%, 100% & 98.65% respectively. Phenotypic identification was found to be having similar sensitivity of 100% but less specificity (60%). NPV and PPV were 100% & 97.33% respectively.

Conclusions: Identification of Acinetobacter to the species level remains challenging up to the species level. Molecular detection of Acinetobacter up to the species level can be associated with other infectious etiologies. The role of the microbiology laboratory is thus very crucial in COVID-19 from overshadowing other infectious diseases, particularly in endemic areas, hence preventing misdiagnosis and consequent adverse outcomes for patients.

https://doi.org/10.1016/j.ijmmb.2021.08.139

COMPARATIVE EVALUATION OF PHENOTYPIC-AUTOMATED VITEK-2 COMPACT SYSTEM & GENOTYPIC METHODS FOR IDENTIFICATION OF ACINETOBACTER BAUMANNII: AN ANALYSIS OF 78 ISOLATES

Amresh pati, Ashoka Mahapatra, Kavita Gupta. AIIMS, Bhubaneshwar

Background: One of the commonest infections encountered both in Community and Health facilities is of Urinary tract. The range of pathogens responsible is varied but till today in most regions Escherichia coli is the commonest isolate. Over a period of time the sensitivity pattern of Urinary isolates changes warranting the need of regular study of Antibiotic susceptibility patterns.

Methods: Study included urine specimens received for culture and sensitivity over a 3 Months period (October 2019 to December 2019) in a tertiary centre in Jaipur. Semi-quantitative method was used for culture of urine and Kirby-Bauer method was used for Antibiotic sensitivity test of isolates. CLSI guidelines were followed. All data was collected and analyzed for significance.

Results: A total of 5970 urine specimens were received over the 3 Months period and 19.02% (1136) of these were culture positives. The most common bacterial isolate was E. coli (50.52%, 574/1136) followed by Pseudomonas species (14.61%, 166/1136), Enterococcus species (8.80%, 100/1136) and Klebsiella species (6.51%, 74/1136). Overall Gram - Negative Bacilli were isolated more than Gram-Positive Cocci.

Conclusions: Urinary isolates and their sensitivity pattern studied impressed the need for continuous updating of date for selection of empirical treatment

https://doi.org/10.1016/j.ijmmb.2021.08.141

EFFECTIVENESS OF A MULTIMODAL INTERVENTION TO IMPROVE BLOOD CULTURE COLLECTION IN THE EMERGENCY DEPARTMENT. A QUALITY IMPROVEMENT STUDY

Rosemary Shaji V, Apurba Sankar Sastry, M. Vivekanandan, Haritha Madigubba, N. Balamurugan. JIPMER

Background: The blood culture is an essential tool for diagnosing bloodstream infections and guiding antibiotic therapy. However, false-positive blood cultures due to specimen contamination with skin bacteria are a common problem that leads to unnecessary patient morbidity, increased hospital cost, health care system inefficiency, prolonged hospitalization, antibiotic treatments, laboratory tests, and invasive procedures. The blood culture contamination is a significant problem in our hospital, especially in the emergency department. Therefore the quality improvement study was undertaken to reduce the blood culture contamination rate in the emergency department. The objective of the study was to determine the difference in the blood culture contamination rate in emergency department between pre-intervention and post-intervention phase.

Methods: This was an intervention study aimed at improving the quality of blood samples drawn for culture. Ethical clearance was obtained. The intervention was implemented in emergency department of JIPMER Puducherry and its effect on blood culture (Bact/Alert) contamination evaluated by comparing the percentages of blood cultures contaminated during pre-interventional (November - April 2020) and post-interventional phase (May - October 2020). The intervention involved implementation of blood culture collection set, video graphic and pictorial representation of aseptic blood collection techniques and verbal awareness on quality improvement and proper filling of the blood culture requisition form. The goal was to achieve and maintain a contamination rate below by 50%.

Results: During the pre-interventional phase 76 of 460 (16.52%) cultures were contaminated, compared to 15 of 460 (3.26%) during the intervention period.

Conclusions: Implementation of this intervention led to an immediate and sustained reduction of contamination in an ED with a high baseline contamination rate and there will be subsequent reduction in laboratory work load, prolonged hospital stay and emergence of resistant strains.

https://doi.org/10.1016/j.ijmmb.2021.08.142

DETECTION OF INTRAEPITHELIAL BACTERIAL BIOFILM IN CASES OF RECURRENT URINARY TRACT INFECTION.

Kharchandy H. Larikyrpang, A.S.H.I.S.H.K. SINGH, M.U.N.E.S.H.K. GUPTA, S.H.I.V.E.N.D.R.A. SINGH, N.E.R.A.J. DHAMENJYA. Department of Microbiology, IMS, BHU, Varanasi

Background: Clinically, urinary tract infection categorized into acute UTI and chronic/ recurrent UTI. It can be due to re- infection or relapse. Reinflection is caused by another bacterial isolate whereas relapse is caused by persistent colonization of the urinary tract by the same pathogen. It was observed that Type 1 fimbrise of uPEC enhance bacterial survival, stimulate mucosal inflammation, promote invasion and growth as a biofilm like intracellular bacterial communities in- side urothelium in animal models. Due to paucity of studies on humans, it would be prudent to document intraepithelial bacterial biofilm among recurrent UTI cases to delineate its role in recurrent UTI.

Methods: A prospective study conducted in a tertiary level University Hospital, in which 78 subjects suffering from acute UTI and yielded a pathogen, with a history of Acute UTI in the past 1 year, were enrolled from February 2019 till July