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Neisseria gonorrhoeae bacteremia: A case study

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Rationale: Neisseria gonorrhoea causes well known sexually transmitted diseases such as genital, pharyngeal and ano-rectal infections. Bloodstream invasions occur only in 0.5-3% of infections and results in disseminated gonococcal infections.

Objectives: The objective of this study was to demonstrate the ability of Neisseria to cause bacteraemia and their prompt identification from a blood culture positive bottle in a regional laboratory setting.

Methods: Blood culture using BACTEC 9240 (Becton Dickinson), Gram stain technique, MALDI TOF, VITEK 2 System, MIC techniques for antibiotic sensitivity were used in the study.

Results: Blood culture bottle became positive on day 3 and the gram stain from culture on day 4 demonstrated gram negative diplococci. MALDI TOF reading gave 2.2 and VITEK 2 System gave a result of 99% probability. The organism was sensitive to Penicillin, Ceftriaxone and Ciprofloxacin.

Conclusion: The Neisseria bacteraemia was an accidental discovery in this patient who had presented to ED with fever. The patient was not aware of Neisseria infection. The timely detection of Neisseria helped the health authorities to track down the patient and commence his treatment with ceftriaxone 500 mg and azithromycin 1g, thereby limiting the spread of this infection in his community.

Biography

Jayachandran Nair received his bachelor degree in Medical laboratory science from Mahatma Gandhi University, India and his post graduate degree in Medical Molecular Microbiology from University of Manchester, United Kingdom and is currently working as the Laboratory manager of a large regional government Pathology service (Pathwest Laboratory Medicine, WA) in Kalgoorlie, Western Australia. His work in public pathology service has enabled him to closely study the diverse clinical cases that he encounters involving remotest communities in Australia. His 15 year career also involved a stint in Veterinary diagnostics. He has worked extensively as a scientist in Microbiology and collaborated with leading physicians and veterinarians in developing research projects in countries like Saudi Arabia, China and UK. His work on developing a milk screening ELISA test and culture for Mycoplasma bovis contributed significantly to the productivity of dairy industry in Saudi Arabia. His professional pursuits include having a deeper understanding of the co-relation between disease pathology and laboratory results, with emphasis on Microbiology and Haematology. He has also published few articles to this effect and his case study and article on: Plasmodium falciparum-An antipodean case study, was well received at the AIMS regional conference in Bunbury and national conference in Adelaide. Jayachandran is also a member of professional organisations like IBMS, UK; Science council, UK and AIMS, Australia. At present, he is working towards a fellowship with AIMS.

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