Clinical Studies on Microbiology of Post Operative Wound Infections

Nishith A Vachhani1, Hemant V Sukhadia2, Kirit P Patel3

1Microbiology Department, Saurashtra University, Rajkot, India
2Microbiology Department, M & N Virani Science College, Rajkot, India
3Director, Sanjeevani Pathology Laboratory, Rajkot, India

Abstract

Antibiotic discovery has opened a new era in the treatment of post operative wound infection. Soon after the emergence of antibiotics resistant strains were observed. Later half century has resulted an alarming increase in this phenomenon. Our last two years study has justified the above statement. Our entire research work was carried out on the emergence of resistant strains in post operative wound infection scanning, identification and anti microbial susceptibility testing. The complete study was carried out on Micro Scan auto SCAN4 (USA-FDA approved system) for organism identification to the species level & determining antimicrobial agent susceptibility in minimum inhibitory concentration (MIC) value. Total 5810 pus samples were collected from the post operative wound infection patients. The positivity rate is 9.79%. The isolated microbial strains include Staphylococcus Spp., Enterococcus Spp., E. coli, Klebsiella Spp, Pseudomonas Spp, Proteus Spp., Candida Spp. and many others. Many of them are Methicillin Resistant Staphylococcus aureus, Extended Spectrum Beta-Lactamase producers & KPC carbapenemase producer strains. All of them were analyzed for antimicrobial susceptibility using around 30 routinely used antibiotics for treatment of infection. The alarming speed of acquiring resistance against antibiotics now suggests the proper usage of antibiotics.

Keywords: P.O.W.I., MicroScan autoSCAN4, MIC, M.R.S.A., ESBL, KPC.
POST OPERATIVE WOUND INFECTION STUDY NECESSITATES THE HOLD OF THE MOLECULAR MEDICINE BY 2011

Nishith Vachhani①, Dr. Hemant Sukhadia②, and Dr. Kirit Patel③

①Microbiology Department, Saurashtra University, India, nv2805@gmail.com
②Microbiology Department, Shree M & N Virani Science College, India, dattarthi@gmail.com
③Director, Sanjeevani Pathology Laboratory, India, sanjeevani_pathlab@yahoo.com

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Corresponding Author:
Nishith A. Vachhani
302-Landscape Apartment,
Near Sun City Apartment, Sadhu Vaswani Road,
Rajkot – 360 005
Dist. - Rajkot, Gujarat, India
Phone: +91 9428277347; Lab: +91 281 2467023
E-mail: nv2805@gmail.com
EPIDEMIOLOGICAL STUDY ON POST OPERATIVE WOUND INFECTION

Sukhadia Hemant and Vachhani Nishith
Microbiology Department – Shree M. & N. Virani Science College – Rajkot
Email: dattarth@gmail.com & navachhani@rediffmail.com

Post operative wound infection is preventable, but it still remains the area of serious concern, because, all the surgeries carried out, about 9% suffers from post operative surgical wound infections. More attention is desirable due to newly emerging antibiotic resistant strains of the etiological agents. This percentage might increases and may reach to an alarming state.

Keeping this in view, POWI infections were studied & characterized for the period of July-2008 to July-2009 from a reputed hospital of Rajkot. 3150 surgery cases were reported and characterized. Samples were collected from clinically suspected sites, etiological agents were isolated & identified following the standard microbial analysis and their antibiotic susceptibility pattern was characterized as per CLSI guidelines. The data were presented in a tabular and in a graphical form. Analysis of the antibiotic pattern of the isolates causing POWI will enable the hospitals to make a judicious use of antimicrobials during pre and post operative surgeries. Probably these may help in controlling emerging antibiotic resistant strains.

Key words: Post Operative Wound Infection, CLSI Guidelines, Antibiotic resistant strains, Antibiotic Susceptibility Testing

DEPARTMENT OF MICROBIOLOGY, M. G. SCIENCE INSTITUTE
NAVRANGPURA, AHMEDABAD - 09