

عنوان مقاله:

Wound Infection with Multi-Drug Resistant Clostridium Perfringens: A Case Study

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نویسندگان:

R Khandia - Department of Biochemistry and Genetics, Barkatullah University, Bhopal ۴۶۲۰۲۶ MP, India

N Puranik - Department of Biochemistry and Genetics, Barkatullah University, Bhopal ۴۶۲۰۲۶ MP, India

D Bhargava - Department of Biochemistry and Genetics, Barkatullah University, Bhopal ۴۶۲۰۲۶ MP, India

N Lodhi - Department of Biochemistry and Genetics, Barkatullah University, Bhopal ۴۶۲۰۲۶ MP, India

B Gautam - Department of Biochemistry and Genetics, Barkatullah University, Bhopal ۴۶۲۰۲۶ MP, India

K Dhama - Division of Pathology, Indian Veterinary Research Institute, Izatnagar, Bareilly ۲۴۳۱۲۲, UP, India

خلاصه مقاله:

Wound infections are among public health problems worldwide. However, progress has been made in improving surgical techniques and antibiotic treatments. Misuse/overuse of antibiotics to prevent and treat bacterial infections eventually leads to increased bacterial resistance with rising incidences of multi-drug resistant (MDR) bacterial strains. The wider dissemination of antibiotics may ultimately result in ineffectiveness to antibiotic therapy, thereby complicating/graving the outcome of a patient. In the present study, a ۶۰-year-old male patient having wound infection with MDR bacterium that ultimately required surgical amputation of the toe was investigated. For the confirmation of MDR bacterium, two culture media viz., MacConkey Agar and Mueller Hinton Agar media were used. The sensitivity of the isolated strain for various antibiotics was tested using the disc diffusion method. The wound sample was found positive for Gram-positive bacterium that was identified as Clostridium perfringens. The bacterium was screened for ۴۰ antibiotics, and among all the antibiotics, it was found sensitive for only Piperacillin/Tazobactam antibiotic combination. C. perfringens bacterium caused the gas gangrene in the infected wound part of the patient. Amputation of the gangrene-affected foot part was performed by surgery, and with good medical care, the person recovered fast. To the best of our knowledge, this is the first-ever report of MDRC. perfringens single isolate harboring resistance against at least ۴۰ antibiotics tested. More research is needed to develop really new and effective medicines that do not cross-react with antibiotics now in use and have robust activity against MDR organisms.

کلمات کلیدی:

Clostridium perfringens, Gas gangrene, Multi-drug resistance, wound

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