

# Prospective Study on Surgical Antimicrobial Prophylaxis and Incidence of Surgical Site Infections

Jane Nguyen K\*

Department of Pathology, Stanford University, CA, USA

\*Corresponding author: Jane Nguyen K, Department of Pathology, Stanford University, CA, USA, Email: janeguyenK@gmail.org

Received date: May 3, 2021; Accepted date: May 17, 2021; Published date: May 24, 2021

Citation: Perego D (2021) Renal Prospective Study on Surgical Antimicrobial Prophylaxis and Incidence of Surgical Site Infections. J Clin Exp Pathol 11:e131.

Copyright: © 2021 Nguyen KJ. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Description

Health Care-related Infections is one of the principal public health challenge and among the distinguished HAIs, Surgical Site Infections (SSI) contributing to significant increases of mortality and morbidity, considerable prolongation in length of hospitalization and added treatment expenses.

Wound infections are one of commonest healthcare-associated infections in department of surgery. They bring about increased antibiotic usage, extended treatment costs and hospitalization days. Multiple uses of antibiotic decrease the wound infection, however, excessive uses of antibiotics leads to antimicrobial resistance.

Surgical antibiotic prophylaxis is defined as the use of antibiotics to prevent infections at the surgical site. It must be clearly identified from the use of antibiotics prior to the surgery and after the surgery to prevent infections.

First surgical antibiotics prophylactic experimented on pigs about 40 years ago. This experiment shows effective antibiotic therapy within three hours prior to surgery. After this several research conducted on humans and animals, which shows similar results on preventing infection after antibiotics therapy after prophylactic therapy.

Almost 30%-50% of antibiotic in regular practice is used for prophylaxis before and after surgery. Proper use of antibiotics should be used as per guidelines. If not used proper according to the guidelines leading to resistance. Most of the time, the antibiotic is either given at the wrong time or continued for too long. Controversy stays as to the period of prophylaxis and additionally as to which precise surgical techniques ought to receive prophylaxis.

Hospitalized patient are highly prone to get an infection. Most common is surgical site infection which leads to the prolonged hospital stay, increase cost of therapy, cause morbidity, disability, increase the cost of healthcare and even mortality. Regardless of numerous research and great practice in surgery operating room, use of prophylactic antibiotics, infection still remains the second one most common adverse event happening in hospitalized affected person and a primary source of mortality and morbidity following surgical procedures.

The study revealed that most of the antibiotics prescribed is 3rd generation cephalosporin. Cefotaxime, ceftriaxone and amikacin is the most commonest antibiotics used in hospital. The study has indicated that some prophylactic antibiotics practices are inappropriate. Two or three antibiotics combination received by patient which is not recommended by any guidelines. Prolonged use of post surgery prophylaxis is not recommended, which increases the cost of therapy patient with diabetes, old age and associated infection is the most common cause developed infection. The study clearly concluded about the overuse and inappropriate choices of antibiotics. Hence, our study also suggests following the guidelines for rational use of antibiotics and minimizing the inappropriate antibiotic use is the best way to minimize the chances of SSI. The health centre needs to establish prophylactic antibiotics tenet which ought to be open and available by means of each member of the surgical team. The medical checklist needs to be practised successfully. Frequent audit of prophylactic antibiotic use is wanted to enhance right practices. Surgeons must adhere to specific antibiotics guidelines.

\*Corresponding author: Jane Nguyen K, Department of Pathology, Stanford University, CA, USA, Email: janeguyenK@gmail.org

Received: May 03, 2021; Accepted: May 17 2021; Published: May 24 2021

Citation: Nguyen KJ (2021) Prospective Study on Surgical Antimicrobial Prophylaxis and Incidence of Surgical Site Infections. J Clin Exp Pathol 11: e131.

Copyright: © 2021 Nguyen KJ. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.