

The Practice of Preoperative Antibiotic Prophylaxis and the Adherence to ASHP Guideline in Different Hospitals in Riyadh

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ABSTRACT

Appropriately administered antibiotic prophylaxis reduces the incidence of surgical wound infection. Prophylaxis is uniformly recommended for all clean-contaminated, contaminated and dirty procedures. It is considered optional for most clean procedures, although it may be indicated for certain patients and clean procedures that fulfill specific risk criteria.

INTRODUCTION

The aim of the study is to assess the practice of surgical antibiotics prophylaxis and adherence of practitioners in Riyadh hospitals to the American society of health system pharmacists guidelines for antimicrobial prophylaxis in surgery and to explore reasons for non-compliance.

METHADODOLOGY

A cross-sectional study was conducted in six hospitals in Riyadh since 16-10-2014. A questionnaire was designed to collect information from physicians regarding the practice of surgical antibiotic prophylaxis, references used for guiding surgical antibiotic prophylaxis practice prevalence of surgical site infection and causative microorganisms.

RESULTS

A total of 25 surgery physicians filled the survey.

The survey shows that physicians depend mainly on textbook and guidelines.

About 1.5 % of the physicians correctly employed SAP for clean and 34.3% for clean-contaminated surgeries. However, 32.8 % used SAP incorrectly for contaminated surgeries, and 31.3% for dirty operations.

The most common pathogens causing surgical site infection were *Staphylococcus aureus* 48.7% and *Escherichia coli* 33.35 %.

About 44% of physicians used more than two doses of SAP, 28% used two doses, and 28% used only one dose.

57.7 % said that Surgical site infection rates were 1-5%.

The most commonly used antibiotic for surgical prophylaxis was cefuroxime followed by ceftriaxone.

The first dose of the first choice antibiotic regimen administered less than 1 hr before operation in 36.67 % and at the time of induction of anesthesia in 43.33 %.

The antibiotic regimen is administered over up to 1 day in 44% of Cases.

52 % said that the most common cause of improper antibiotic choice drug unavailable.

DISCUSSION

In this study, we assessed the practice and adherence to the American Society of Health-System Pharmacists (ASHP) guidelines for antimicrobial prophylaxis prior to surgery and explored reasons for non-compliance.

Our study shows that there were inconsistencies between ASHP guidelines and current practice. Similar findings were reported in a previous study conducted in Jordan .

In contrast to other studies , our results indicated that 43.33% of physicians administered the SAP at the time of anesthesia induction. This is considered the correct timing according to ASHP guidelines for most procedures, since this ensures

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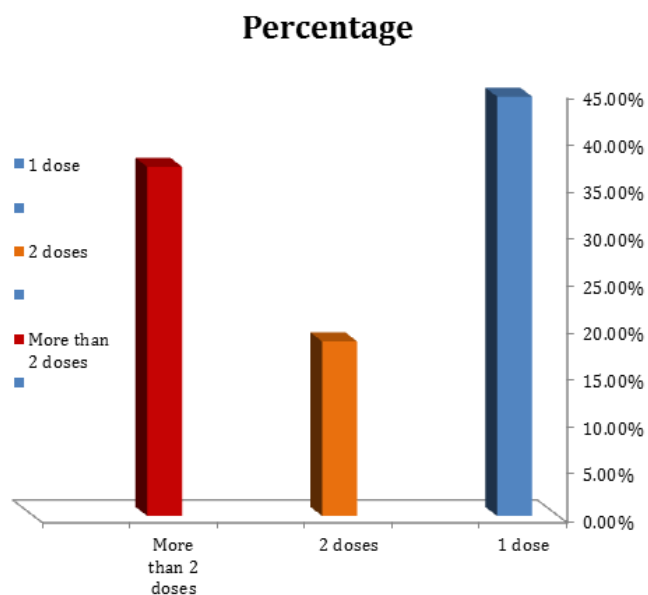


Figure 1: How many times is the patient given that antibiotic regimen ?

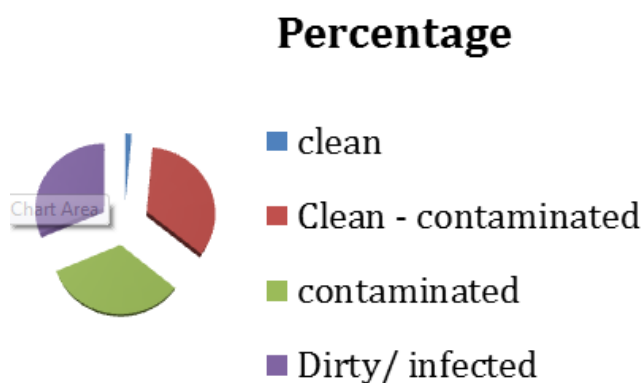


Figure 2: Based on surgical wound classification, in which do you use an antibiotic?

adequate antibiotic concentrations in the targeted tissues during the period of potential contamination

The first-generation cephalosporin, cefazolin, is regarded as the antimicrobial agent of choice for most procedures according to ASHP guidelines. It has a relatively long duration of action .is effective against the most commonly encountered organisms in surgical procedures, and has a relatively low cost.

CONCLUSION

In conclusion, physicians in Riyadh hospitals are aware of the importance of antimicrobial prophylaxis before surgical procedures. However, further efforts are needed to ensure the implementation of the accepted practices of SAP in Riyadh hospitals. This might be achieved by establishment of effective continuous medical education programs for physicians and pharmacists, and periodic assessment of compliance with evidence-based SAP guidelines.

REFERENCES

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