

INTRODUCTION

- Antibiotic prophylaxis refers to the prevention of infection complications using antimicrobial therapy. It can be used effectively to prevent infection, but its use should be limited to specific, well-accepted indications to avoid excess cost, toxicity, and antibiotic resistance.
- Optimal timing of antibiotic administration is considered an important factor for effective prophylaxis. Inappropriate timing may result in low plasma concentration of the antimicrobial agent at the time of incision and throughout the procedure, contributing to higher infection rates.
- Preoperative prophylactic antibiotics should be administered within 60 minutes before the initial incision is made.
- Also WHO surgical safety checklist has a marking about administration of antibiotics.

RATIONALE

To find out the compliance of antibiotic prophylaxis administration before surgery so as to reduce the risk of infections.

OBJECTIVE

- To determine antibiotic prophylaxis compliance in hospital during surgical procedures in order to reduce Surgical Site Infections.
- To study the usage pattern of prophylactic antimicrobials in surgical patients, in order to detect any inappropriateness concerning the, timing, redosing and the duration of antimicrobial administration.

RESEARCH METHODOLOGY

A Prospective Descriptive study was conducted at a Super speciality hospital in New Delhi on Compliance of Antibiotic Prophylaxis. Study was carried on from 30-4-2016 to 19-5-2016

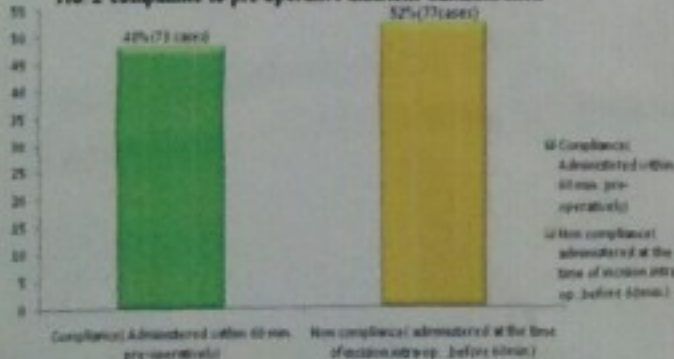
- TYPE OF STUDY :** Prospective Descriptive study
- STUDY POPULATION :** Patients Undergoing surgery at Max Saket Hospital
- DURATION OF STUDY :** 30-4-2016 to 19-5-2016
- SAMPLE SIZE :** 150 cases
- TOTAL POPULATION :** 734 cases
- SAMPLING TECHNIQUE :** Convenience non probability sampling
- TYPE OF DATA :** Secondary
- TOOL OF DATA COLLECTION :** Checklist
- SOURCE OF DATA :** Patient records, Surgical checklists, CPRS (Computerized Patient Record System), Pre-anaesthetic record.
- DATA ANALYSIS :** Analysis using percentage and sort and filter on Excel

STUDY ANALYSIS AND GRAPHICAL REPRESENTATION

FIG. 1 Time of Antibiotic Administration in Surgery patients



FIG. 2 Compliance to pre-operative antibiotic administration



DEPARTMENT WISE ANALYSIS OF DATA DEPICTING TIME OF ADMINISTRATION OF ANTIBIOTIC PROPHYLAXIS

FIG. 3 Antibiotic prophylaxis administered within 60 min. of surgery

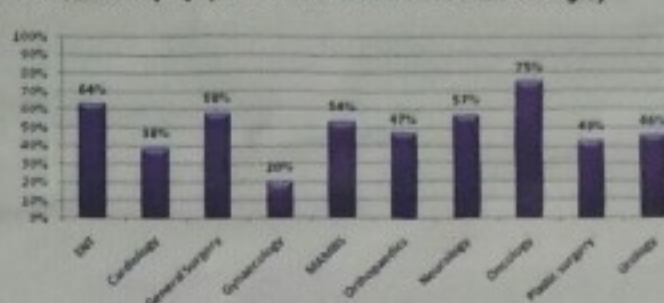


FIG. 4 Antibiotic prophylaxis administered at the time of incision

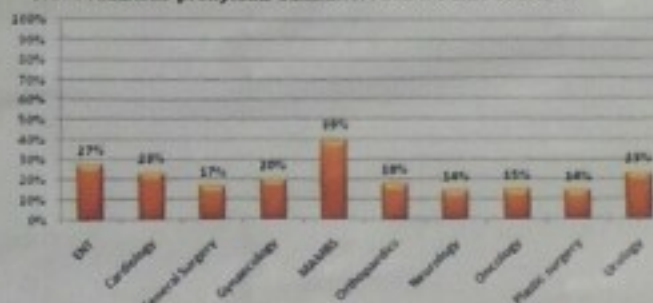


FIG. 5 Antibiotic prophylaxis administered intra operatively

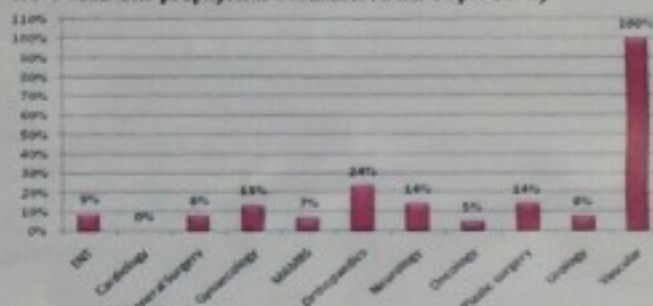
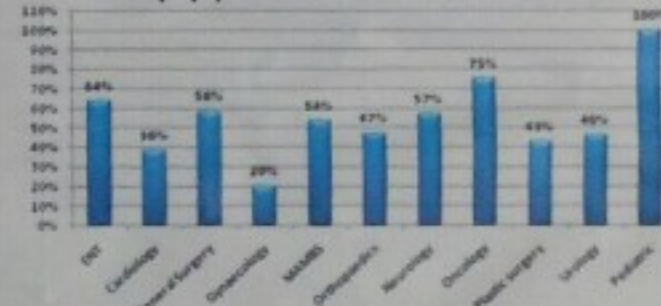


FIG. 6 Antibiotic prophylaxis administered more than before 60 min.



RECOMMENDATIONS

- All patients for whom prophylactic antimicrobial agents are recommended should receive them. The agents given should be appropriate in light of published guidelines.
- Proper timing should be noted down in Surgical safety checklist and also in Pre-anaesthetic record so as to make sure that the drug has been administered at an appropriate time before surgery.
- As soon as the drug is administered its proper timing and dosage should be mentioned in CPRS of hospital for further reference for line of treatment.
- There should be a protocol regarding administration of antibiotic so as to ensure administration in time.

CONCLUSION

A study carried out on Antibiotic prophylaxis administration in a super speciality hospital suggest that there was lack of adherence to antibiotic administration guidelines; as many cases were not administered with antibiotic within 60 minutes of carrying out surgical procedure which puts patients on risk of developing secondary infections.