



Arrival in Operation room to Incision Time: Experience in Multispecialty Hospital in Kuwait

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Background

More than 60 min gap between preop antibiotic administration and incision is an important factor affecting surgical site infection (SSI) rates and SSI related morbidity. Multiple activities are undertaken after patient arrives in operation room viz. vein cannulation, anesthetizing urinary catheterization, positioning, cleaning, draping etc. Surgeons spend time in positioning of patient before surgery, as proper positioning makes approaching anatomical structure of interest easy.[1] Different specialties require different positioning for each operation, which can be time consuming. Thus, timing of preop antibiotic administration should be flexible. This audit aims at studying time taken by each specialty after patients' arrival in operation room.

Aim

This audit was planned to determine factors responsible for failure of perop antibiotic administration in 60 mins prior to incision.

Objective

To determine specialties requiring more time for incision from arrival in operating room.

To determine common factor if any responsible for long incision time from arrival in operation room.

Standard: Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery, 2013. [2]

Methodology

A retrospective audit in looking at all patients booked for procedure in operation theater from July 2022 till October 2022.

Patients were identified from operation theater and recovery room records.

Total 1035 patients were registered for procedure in operation theater during this period at Kuwait Hospital.

Details form of operation room entry, operation start time, operation end time, and operation room exit time were collected from operation theater data in excel sheet.

Details of specialty, antibiotic name, antibiotic start time and incision time were collected from recovery room in excel sheet.

Data was cleaned and analysed using “python”, Pandas” and ”seaborn”.

Results

Total 1035 major operations were done during this period. Of them 293(28.31%) patients took more than 30 for incision after arrival in operating room. Orthopedic surgery, Neurosurgery, and Plastic surgery patients took > 30 mins for incision from arrival in operating room. They together formed 22.52% of patients in OT. Mean time to incision for Orthopedic surgery, Neurosurgery, and Plastic surgery from arrival in operating room was 41 (Std 18) mins,38 (Std 13) mins, and 35 (Std 12) mins respectively.



Fig: 1 Sequence of events from patient arrival to pre-op area reception to Incision.

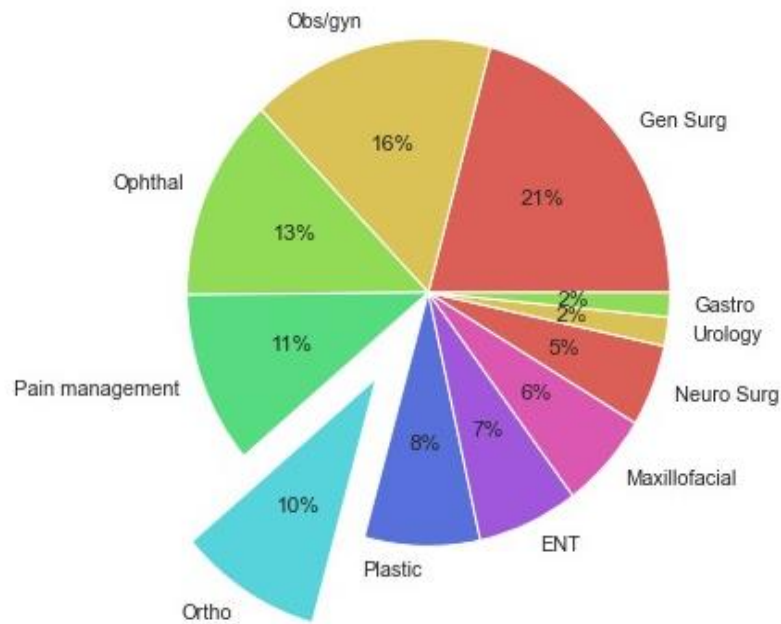


Fig2: Pie chart showing percentage of patients operated between July 2022 till October 2022.

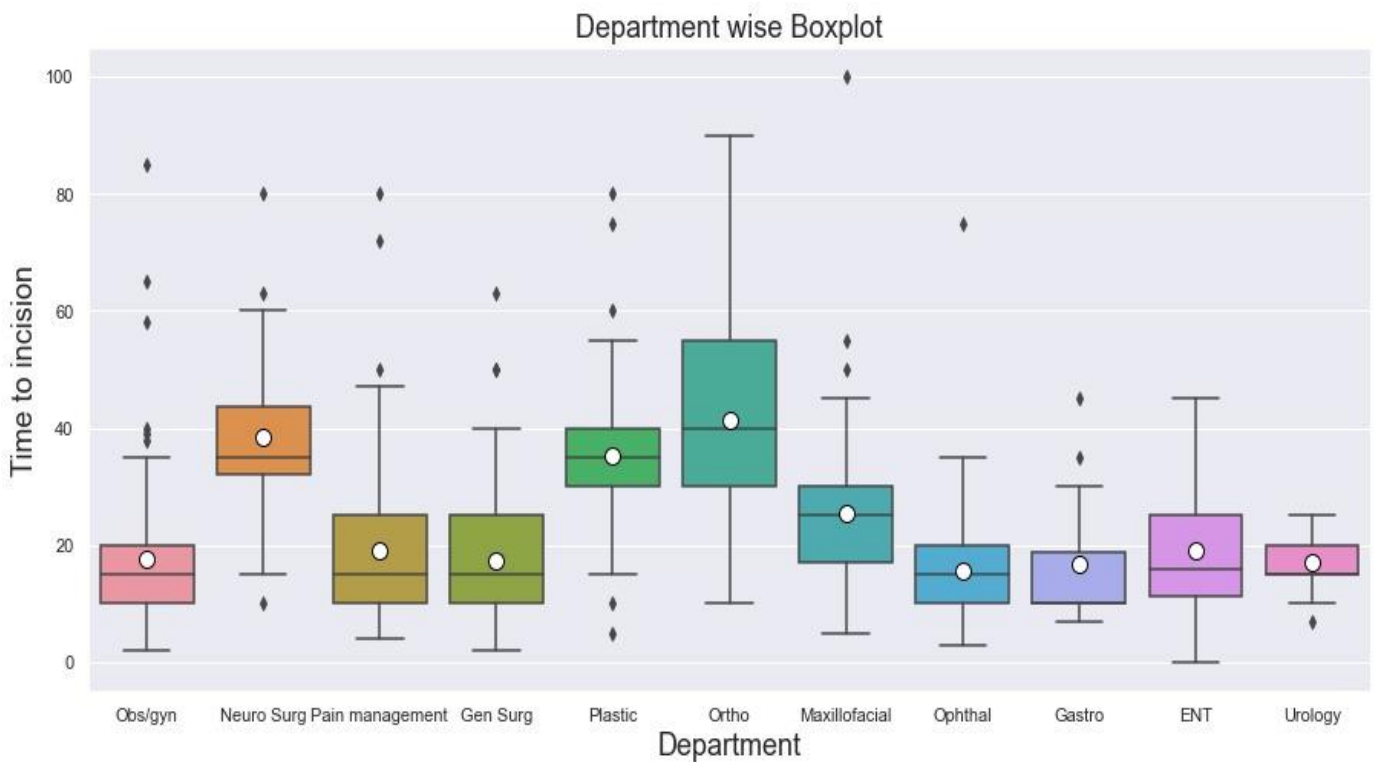


Fig 3: Boxplot showing Department time taken for incision.

Conclusion

Whilst timing preop antibiotics administration for Orthopedic surgery, Neurosurgery, and Plastic surgery patients, time required for positioning for surgery should be noted, time taken for positioning of these patients should also be consideration.

Recommendation Made

Orthopedic surgery, Neurosurgery, and Plastic surgery patients should receive IV antibiotics after arrival to preop holding area to reduce the gap between preop antibiotic administration and incision.

References

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