Evaluation of Pharmacist's contribution to the prevention of surgical site infections (SSI)

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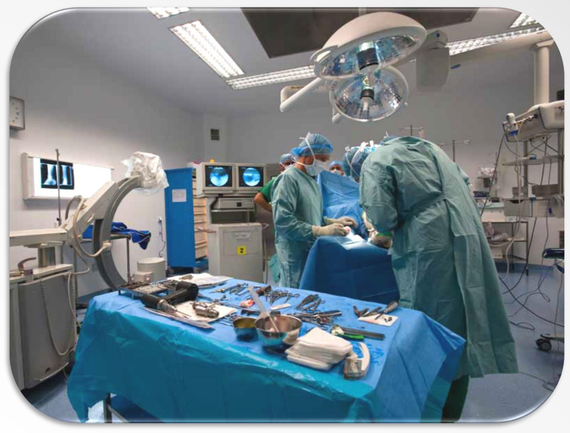
BACKGROUND AND IMPORTANCE



Antibiotic prophylaxis in surgical environment is an essential step in the fight against surgical site infections (SSI). Our hospital pharmacists are involved in the proper use of antibiotics.

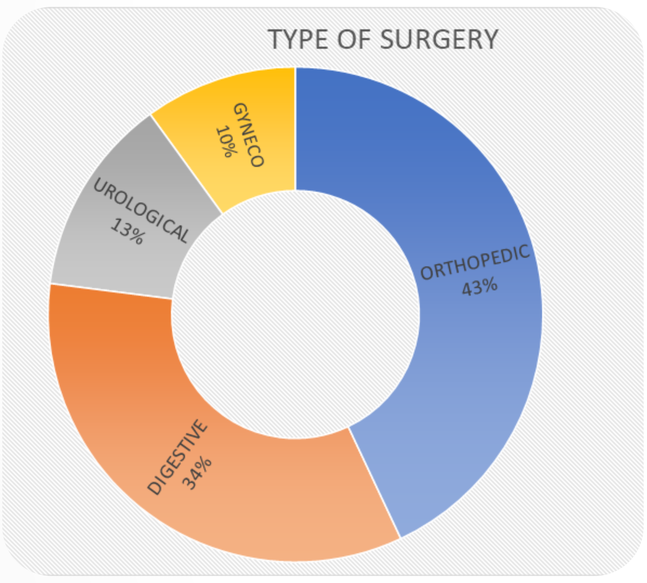
AIM AND OBJECTIVES

The objective of this study is to determine whether **pharmacists' actions have improved antibiotic prophylaxis in surgical environment and resulted in a reduction in the number SSI.**

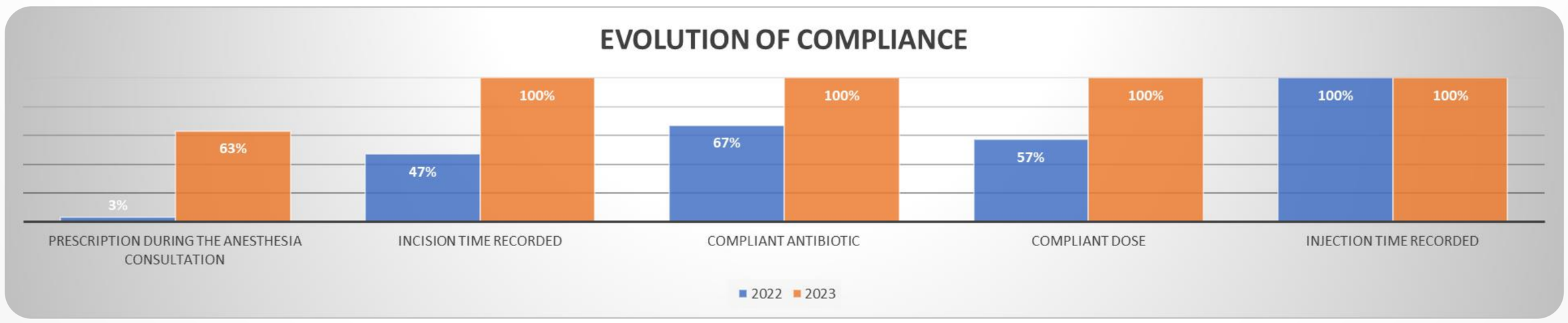
MATERIAL AND METHODS

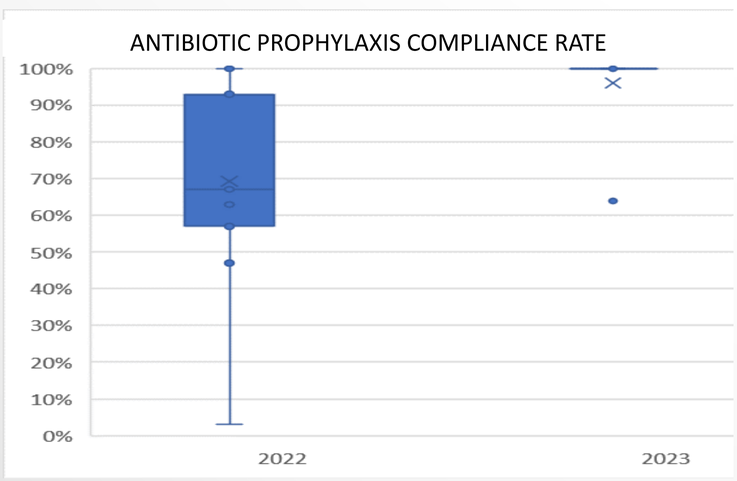
Patients who underwent surgery in the operating room were included in this retrospective study. Pharmacist and hygienist doctor analyzed 11 items in patient's files operated on in 2022 and then a comparison was made from new files of patients operated on in 2023 after the implementation of corrective actions. A **comparison test of means (n≥30; α = 0.05) comparing each item before and after the implementation of improvement actions** was carried out. **SSI rate** 2022 was compared to SSI rate 2023.

RESULTS



A pharmacist specializing in antibiotic therapy joined hospital's antibiotic committee. A specific antibiotic prophylaxis protocol for surgical procedures performed in our institution was defined. These guidelines were presented to anesthesiologists and nurses during awareness sessions. This retrospective study was conducted on **60 patients** who received antibiotic prophylaxis.
Results show a **statistically significant improvement** on certain criteria: antibiotic prophylaxis scheduled during anesthesia consultation 3% VS 63%; surgical incision time recorded 47% VS 100%; antibiotic compliant with protocol 67% VS 100%; dose compliant with protocol 57% VS 100%.





The proportion of deep **SSIs is higher in 2023 (p = 0.0008)**, increasing from 0.02% in 2022 to 0.39% in 2023. **The majority of SSIs (62.5%) are caused by Staphylococcus aureus.**

INCRIMINATED BACTERIAS	
Staphylococcus aureus	-
Methicillin-resistant Staphylococcus aureus	3
Methicillin-sensible Staphylococcus aureus	2
Coagulase-negative Staphylococci	-
Staphylococcus epidermidis	1
Staphylococcus haemolyticus	1
Enterobacter cloacae	1
Klebsiella aerogenes	2
Pseudomonas aeruginosa	1

CONCLUSION

In our hospital **overall compliance increasing from 63% to 93%**. Awareness-raising actions have also improved the reporting of ISOs. Pharmacists play a vital role in raising awareness and alerting prescribers in the event of a discrepancy with the recommendations.

Références : [1] Parente DM. Med Clin North Am. 2018 Sep;102(5):929-936. doi:10.1016/j.mcna.2018.05.009. PMID: 30126581.
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