



Piperacillin/tazobactam use in emergency departments: are we in line with the guidelines? A retrospective cohort study.

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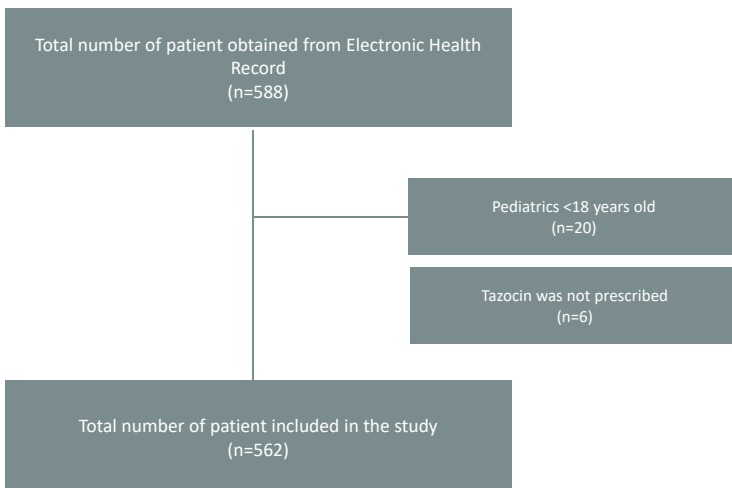


Introduction

- Antibiotic resistance is rising to dangerously high levels in all parts of the world. New resistance mechanisms are emerging and spreading globally, threatening our ability to treat common infectious diseases¹.
- WHO's new Global Antimicrobial Surveillance System (GLASS) reveals widespread occurrence of antibiotic resistance among 500 000 people with suspected bacterial infections across 22 countries¹.
- Piperacillin/tazobactam is an extended spectrum beta lactamase inhibitor antibiotic that has a broad-spectrum activity.

Methods

- Study design: retrospective cohort study.
- Study setting: Emergency Department at Security Forces Hospital, Riyadh, Saudi Arabia.
- Study Duration: 12 months (from 1st July 2018 to 30th June 2019)
- IRB Approval was obtained (H-01-R-069) 06 Oct 2019



Conclusions

- This study shows high percentage of unjustified prescribing of piperacillin/tazobactam antibiotic.
- Further investigation is needed and could be followed by some interventions like reporting and education sessions for staff and posters on antimicrobial stewardship which is an important element to improve the safety and quality of patient care².
- A Start Smart - then Focus approach is recommended for all antibiotic prescriptions we will recommend it in the sitting².

References

- World. Antibiotic resistance. Who.int. <https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance>. Published February 5, 2018.
- ESPAUR. Start Smart - Then Focus Antimicrobial Stewardship Toolkit for English Hospitals. Public Heal Engl. 2015;(March):1-26. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417032/Start_Smart_Then_Focus_FINAL.PDF.

Objectives

- To evaluate the appropriate use of piperacillin/tazobactam (Tazocin) in the Emergency Department (ED) in accordance with the National Antimicrobial Therapy Guidelines.
- To measure the physician request for culture and assess the (sensitivity \ resistance) of the pathogens during therapy duration.

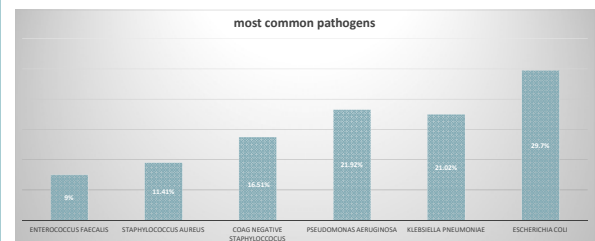
Results

Total number of prescriptions included in the study (n=664)
Prescribed for (n=563) patients

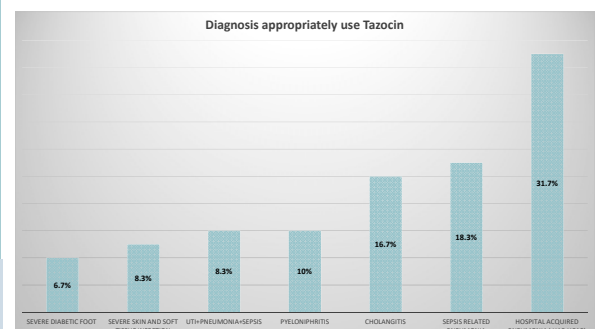
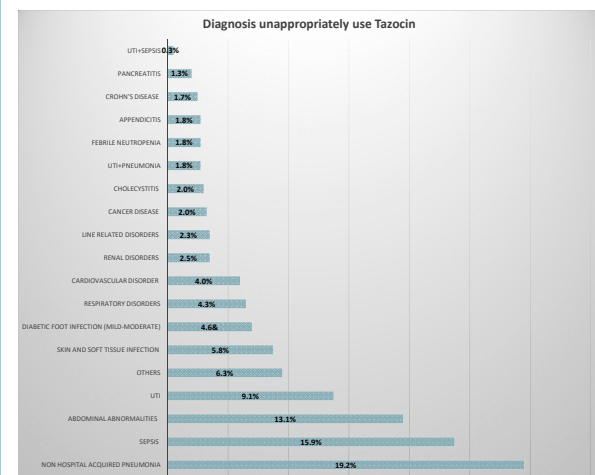
Returned no diagnosis (n=1)

- More than one third (37%) of patient age was between (>65) years old approximately.

Culture	Taken	Not taken
No growth	223	108 patient
Positive culture	333	



- There were 40 cases of laboratory resistance tests reported with piperacillin/tazobactam treatment .



- 91% of the cases showed inappropriate prescription of Tazocin whereas 9% was appropriate.
- There is a variation in duration with patient receiving Tazocin the lowest duration was 1day and the highest was 277 days.