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POST PANDEMIC ANTIBIOTICS RESISTANCE MAPPING FOR PATIENT SAFETY AT CENTRAL JAVA HOSPITALS

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INTRODUCTION

The pandemic has had a widespread impact on various sectors of life, especially the health sector that related to antibiotic use during pandemic. Uncertain therapeutic guidance triggers the use of antibiotics for COVID-19 patients who have the potential for resistance. Overall, the purpose of this study is to obtain an overview of the antibiotic mapping in each hospital from January 2020 until December 2023. Antibiotic resistance mapping plays a role in the preparation of therapeutic strategies, policies and prevention of infection transmission, particularly in tertiary hospitals.

AIM

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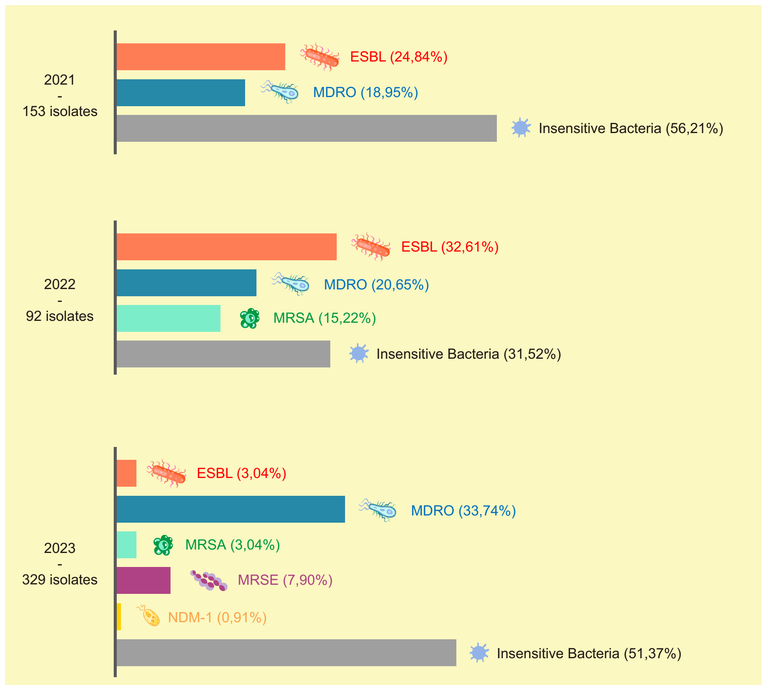
METHOD

This study is an observational descriptive study. The study samples were antibiotic resistance mapping at some tertiary care hospitals, namely Mardi Rahayu hospital Kudus and Telogorejo hospital Semarang. The data observed in the study from 1237 antibiotic sensitivity test's results that are collected and analysed using WHO-Net.

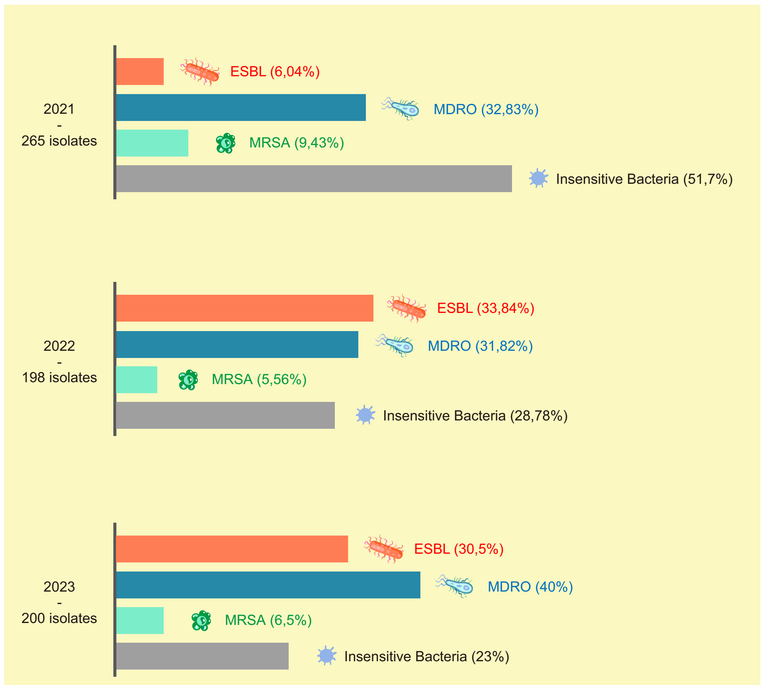
RESULTS

Results showing patterns of antibiotic resistance at Mardi Rahayu hospital during pandemic found in 2021, 153 isolates with the following resistance distribution 38 (24.84%) ESBL and MDRO 29 (18.95%) isolates. Although the number of isolates decreased in 2022 by 92, resistant germs were still found with the addition of 14 (15.22%) isolates MRSA, while the MDRO number of 19 (20.65%) isolates and 30 (32.61%) isolates ESBL. After the pandemic in 2023, there are 329 bacterial cultures. Antibiotic resistance increased sharply with the distribution of the number of MDRO 111 (33.74%) isolates, MRSA 10 (3.04%) isolates, ESBL 10 (3.04%) isolates, MRSE 26 (7.90%) isolates, and NDM-1 3 (0.91%) isolates. On the other hand, Telogorejo hospital's antibiogram in 2021 contained 265 isolates with resistance patterns including ESBL 16 (6.04%) isolates, MDRO 87 (32.83%) isolates, and MRSA 25 (9.43%) isolates. In 2022 with a total of 198 bacterial cultures, the ESBL resistance pattern increased to 67 (33.84%) isolates, 11 (5.56%) MRSA isolates, and 63 (31.82%) MDRO isolates. After the pandemic, in 2023, 200 culture isolates were recorded with an increase in MDRO cases of 80 (40%) isolates, 61 (30.5%) ESBL isolates, and 13 (6.5%) MRSA isolates.

RS MARDI RAHAYU KUDUS



RS TELOGOREJO SEMARANG



CONCLUSIONS

In percentage, it appears that antibiotic resistance has increased post pandemic in 2023 in both hospitals. The antibiogram shows that antibiotics use during pandemic is a source of the problem of resistance, so the antibiogram will be the scientific source for strategies and policies in antimicrobial stewardship, so that the antibiotics given will be oriented to patient safety.

ACKNOWLEDGEMENT

Not applicable

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