Outbreak Case Files



Double Threat:

NDM-producing E. coli Outbreak



USA

HENRY FORD HOSPITAL, DETROIT 2024

PROCEDURE:

EGD, ERCP

PATHOGEN:

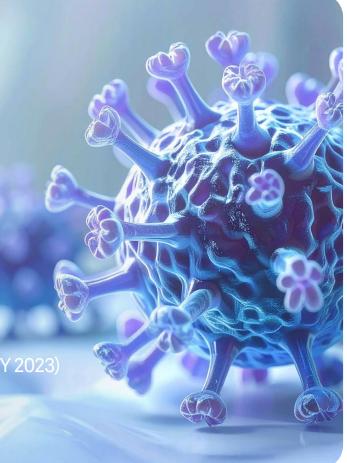
NDM-PRODUCING E. COLI



CASES INFECTED:

9 PATIENTS
 (BETWEEN JULY 2021—FEBRUARY 2023)

- MEAN INCUBATION 86 DAYS (RANGE UP TO 320)
- 3 DEATHS





REPROCESSING FAILURE:

NO BREACH FOUND AND NO PATHOGEN CULTURED, BUT EPIDEMIOLOGY AND WGS SUGGEST SCOPE-LINKED TRANSMISSION; RESOLUTION VIA DISPOSABLE ELEVATOR CAPS.



PATHOGEN IMPACT:

CAUSES SEVERE INFECTIONS (SEPSIS, PERITONITIS), EXTREMELY LIMITED TREATMENT OPTIONS, ~33% MORTALITY.

 $SOURCE: Simner PJ, Patel R. \ New \\ \beta-Lactam/\beta-Lactamase \ Inhibitor \ Combinations \ in the Treatment of Multidrug-Resistant Gram-Negative Bacteria. \ Infect Dis Ther. \\ 2023; 12(3):1243-1264.$

CONSEQUENCES:

- SCREENING OF APPROXIMATELY 1,200 EXPOSED INDIVIDUALS
- WHOLE GENOME SEQUENCING (WGS) CONDUCTED
- SCOPE REMOVAL AND REPLACEMENT REQUIRED
- ESTIMATED HEALTHCARE IMPACT: SEVERAL HUNDRED THOUSAND USD

Protect your patients, protect your hospital, let's find the right solution together.

SOURCE: Suleyman G, Yigit M, Khan F, et al. Use of whole genomic sequencing to detect New Delhi metallo-β-lactamase-producing Escherichia coli outbreak associated with endoscopic procedures. Infect Control Hosp Epidemiol. 2024;45(8):971–976. https://pubmed.ncbi.nlm.nih.gov/38495009/

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