



GASTRO-ID Case Review

- **Patient History:**
Male, mid 70's, LTC resident at a nursing home
- **Disease State:**
Diarrhea. The patient began having symptoms of frequent loose stools with abdominal pain.
- **Why This Test was Ordered:**
They were unsure if the diarrhea was from antibiotics from a UTI, food poisoning, and wanted to rule out C.Diff plus norovirus. Since the patient was in a shared room, it was imperative to rule out C.Diff and norovirus.
- **Outcome:**
Determined a normal gut flora and ruled out infection. Pushed in fluids and able to determine that not only was there not a GI outbreak in the building but that further diagnostics was not necessary. Also provided facility opportunity to determine if there was an environmental contaminant to review.

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Patient Name



Date of Birth



Gender



Race

Facility Information

Ordering Provider:

Facility:

Facility Phone:

Facility Fax:

Specimen Information

ACC:

Collection Date: 06-30-2021

Received Date: 07-01-2021

Notes:

Report Date: 07-02-2021

Sample Type: Rectal/Stool Swab

Laboratory Results

PATHOGENS DETECTED

| | | |
|-----------------------|-------------------------------|------|
| Staphylococcus aureus | 1 x 10 ² copies/uL | 100% |
|-----------------------|-------------------------------|------|

RESISTANCE GENES DETECTED & POTENTIAL MED CLASS AFFECTED

| | | |
|--------------------------------------|----------------------|--|
| TEM, TEM E102K, TEM R162S, TEM G238S | Class A Beta-lactams | |
| ermB | Macrolides | |
| tetM | Tetracycline | |
| Gyrase A D87N_GTT, Gyrase A S83L_TGG | Quinolones | |

ABXAssist™

Pharmacy Guidance Provided by:



Electronically approved on 07-02-2021 by: Robin Ritter

Email: pharmconsult@vikorscientific.com Phone: 1-855-742-7635, 1-855-PharmD5



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Drug Allergies:

Notes from Ordering Physician:

The treatment guidance listed is based on infectious disease treatment references, the organisms detected, and genes known to contribute to medication resistance. Important clinical information such as comorbidities, renal function, etc. may influence the overall appropriateness of therapy. The provided guidance only takes drug allergies into account when they are provided. The provider should take the entire clinical presentation into account when making treatment decisions. Not all detected microbes will require antimicrobial therapy as some are part of the normal flora or can be non-pathogenic colonizers.

Notes from Pharmacist:

Staphylococcus aureus is a common gut microflora. Treatment is not recommended for MSSA or MRSA in the gut at this time. Staph is colonized in the gut just like in the nose. Diarrhea produced by staph from food poisoning should self resolve without treatment because it is the endotoxin that makes you sick. BUT, be aware that Colonized S aureus in gut is a known transmission risk due to environmental contamination. People at risk are in hospitals and long term care facilities.

MEDICATION REVIEW

| Medication | Route | Dose |
|-------------------------------|-------|------|
| No Pharmacy Guidance Provided | | |

| | |
|-------------|---|
| Methodology | The infectious disease and antibiotic resistance detection panels are tested utilizing Real-time PCR technology to detect the presence of genes associated with pathogens and antibiotic resistance via amplification of genomic DNA. Amplification and detection are performed using the Applied Biosystems™ QuantStudio™ 12K Flex Real-time PCR system, which includes the QuantStudio™ 12k Software v1.3 and Thermo Fisher Scientific TaqMan™ assays. The assays are preloaded onto TaqMan™ OpenArray plates. |
| Limitations | This test only detects microorganisms and antibiotic resistance (ABR) genes specified in the panel. ABR genes are detected in the specimen and are not specific to a detected pathogen. ABR genes may be detected in bacterial strains not tested for in the panel. The resistance genes for Ampicillin, selected Extended-Spectrum-Betalactamases, Vancomycin, Carbapenems, Sulfonamide, Trimethoprim, Aminoglycosides and the Quinolone gyrase groupings are assays customized by pooling the individual genes listed in the associated group. If listed as positive, this indicates that at least one of the genes in the group was detected and the class of medication could have potential resistance. |
| Disclaimer | This test was developed and its performance characteristics determined by Vikor Scientific™. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. Pharmacy guidance and recommendations therein are not under the purview of the laboratory or agencies which accredit the laboratory. The treatment guidance listed in the report is based on infectious disease treatment references, the organisms detected, and genes known to contribute to medication resistance. Important clinical information such as comorbidities, renal function, patient weight, platelet count, microbiology results, etc. may influence the overall appropriateness of therapy. The provided guidance only takes drug allergies into account when they are provided and available to the pharmacist making the recommendation. The overall appropriateness of therapy must be determined by the physician treating the patient. The provider has all the patient information necessary to make that determination and should take the entire clinical presentation into account when making treatment decisions. Should the treating physician wish to discuss the provided guidance, the pharmacist is available for consult at the email and phone number provided. |



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NEGATIVE PATHOGENS

- Astrovirus
- C. Dificille Toxin A & B
- Campylobacter jejuni
- Cryptosporidium
- Entamoeba histolytica
- Escherichia EAEC
- Escherichia EIEC/Shigella
- Escherichia EPEC
- Escherichia ETEC
- Giardia lamblia
- H. pylori
- Intestinal adenovirus
- Norovirus GI/GII
- Plesiomonas shigelloides
- Rotavirus A
- Rotavirus B
- Rotavirus C
- Salmonella
- Sapovirus
- Shigella
- Vibrio cholerae
- Yersinia enterocolitica

NEGATIVE RESISTANCE GENES

- aac6-1b/aacA4, ant(3), aph(A6), aac6-1b-cr
- ampC, ACC, DHA, ACT/MIR
- SULL, DFRA
- PER-1, PER-2, VEB, blaNDM-1, OXA-1, GES, BlaSHV
- OXA-23, OXA-40, OXA-58, OXA-72, IMP-16, NDM, blaOXA-48, OXA-48, KPC, VIM, IMP-7
- CTX-M
- ermC, ermA
- mecA
- mcr-1
- QnrB, QnrA
- VanB, VanA1, VanA2

ANTIBIOTIC CLASS

- Aminoglycosides
- AmpC beta lactamase
- Bactrim
- Beta-lactams
- Carbapenems
- ClassA Beta-lactamases
- Macrolides
- Methicillin
- Polymyxins
- Quinolones
- Vancomycin