URINE-ID™ CASE REVIEW

PATIENT HISTORY

Patient is a 49-year-old female with UTI symptoms, negative culture; allergic to Cipro and Sulfa.

SYMPTOMS/DISEASE STATE

Patient reported burning, frequency, and urgency when urinating for the past several days.

WHY THE TEST WAS ORDERED

Patient's culture came back negative, but patient was exhibiting symptoms of a UTI and was adamant that was the cause of her symptoms. Provider determined the need for Vikor's Urine-ID™ since patient was not having relief of symptoms.

RESULTS

PATHOGENS DETECTED

Escherichia coli	1 x 10^7 copies/uL	90.827%
Enterobacter aerogenes	1 x 10^6 copies/uL	9.083%
Streptococcus agalactiae	1 x 10^4 copies/uL	0.091%

RESISTANCE GENES DETECTED & POTENTIAL MED CLASS AFFECTED

tetM	Tetracycline

OUTCOME

Cephalexin 500mg PO BID for 7 days. Both the patient and provider were pleased Vikor Urine-ID™ was able to successfully identify the pathogen of the patient's symptoms and provide PharmD guidance for appropriate treatment. Patient reported that she was relieved of her symptoms after following the recommended treatment regimen.

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KORPATH

UE5647

****SAMPLE REPORT****

Urine-ID™

Molecular Pathogen Report

22 WestEdge Street 8th Floor
Charleston, SC 29403
P: (854) 429-1069 • F: (833) 247-4091
www.vikorscientific.com

CAP ACCREDITED COLLEGE of AMERICAN PATHOLOGISTS #8359749

Clinical Laboratory Improvement Amendments #42D2150400

Patient Name	Date of Birth	Gender	Race
	XX-XX-1972	F	UNDISCLOSED

Facility Information

Ordering Provider:
Facility:
Facility Phone:
Facility Fax:

Specimen Information

ACC:
Collection Date: 10-08-2021
Received Date: 10-09-2021
Notes:
Report Date:
Sample Type:

Laboratory Results

PATHOGENS DETECTED

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RESISTANCE GENES DETECTED & POTENTIAL MED CLASS AFFECTED

tetM	Tetracycline

ABXAssist™

Pharmacy Guidance Provided by: Advance Therapeutic Assist

Electronically approved on 10-10-2021 by: Bradley Pate
•Email: pharmconsult@vikorscientific.com • Phone: 1(855) 742-7635, 1(855) PharmD5

MEDICATION REVIEW

Drug Allergies: CIPRO, SULFA

Notes from Ordering Physician:

Notes from Pharmacist:

	Medication	Route	Dose
FIRST LINE			Macrobid 100mg PO BID x 5-7 days – cystitis only
	nitrofurantoin	oral	Considerations: To cover E. coli and Enterobacter.Not effective in Pyelonephritis or prostatitis. Use caution and adjust dose CrCl < 60ml/min. Contraindicated CrCl < 30ml/min. Avoid use in G6PD deficiency.
	OR		
	fosfomycin	oral	3g every 48-72h x 1-3 doses
			Considerations: To cover E. coli and Enterobacter.Do not use in Py elonephritis.
SECOND LINE			500mg PO BID x 5-7 days (uncomplicated); 500mg PO BID x 10 days (complicated)
	cephalexin	oral	Considerations: To cover E. coli.Does NOT cover Enterobacter.Can utilize Cefdinir if desired.Adjust dose in renal insufficiency.

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OR

ceftriaxone	intramuscular	500mg – 1gram q24h x one to three doses Considerations: To cover E. coli.Does NOT cover Enterobacter.Can be used as monotherapy or in conjunction with other regimens.

ALTERNATIVE

gentamicin	intramuscular	5mg/kg q24h IM/IV Considerations: To cover E. coli and Enterobacter.In renal compromised pt, use Conventional Gentamicin dose: 1mg-2.5mg/kg/dose q 8-12h IV/IM.BBW for ototoxicity and nephrotoxicity.
OR		
piperacillin / tazobactam	intravenous	3.375- 4.5gm IV q6h Considerations: To cover E. coli and Enterobacter.Can utilize Cefepime, Avycaz, Meropenem, or Ertapenem if desired.CrCl 20 to 40 mL/minute: Administer 2.25 g every 6 hours;CrCl <20 mL/minute: Administer 2.25 g every 8 hours;Can be given as continuous infusion.

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
Acinetobacter baumannii
Actinobaculum schaalii
Aerococcus urinae
Alloscardovia omnicolens
Atopobium vaginae
BVAB2
Candida albicans
Candida glabrata
Candida krusei
Candida parapsilosis
Candida tropicalis
Chlamydia trachomatis
Citrobacter freundii
Corynebacterium riegelii
Corynebacterium urealyticum
Enterobacter cloacae
Enterococcus faecalis
Enterococcus faecium
Gardnerella vaginalis
Haemophilus ducreyi
HPV 16
HPV 18
HSV1
HSV2
Klebsiella oxytoca
Klebsiella pneumoniae
Mobiluncus curtisii, mulieris
Morganella morganii
Mycoplasma genitalium, hominis
Neisseria gonorrhoeae
Prevotella bivia
Proteus mirabilis
Proteus vulgaris
Providencia stuartii
Pseudomonas aeruginosa
Serratia marcescens
Staphylococcus aureus

NEGATIVE RESISTANCE GENES	ANTIBIOTIC CLASS
aac6-1b/aacA4, ant(3), aph(A6), aac6-1b-cr	Aminoglycosides
ampC, ACC, DHA, ACT/MIR	AmpC beta lactamase
SULL, DFRA	Bactrim
VEB, blaNDM-1, OXA-1, GES, SHV, PER-1, PER-2	Beta-lactams
VIM, KPC, IMP-7, OXA-48, OXA-23, OXA-72, OXA-40, OXA-58, NDM, blaOXA-48, IMP-16	Carbapenems
TEM, TEM E102K, TEM R162S, TEM G238S	Class A Beta-lactams
CTX-M	ClassA Beta-lactamases
ermA, ErmB	Macrolides
mecA	Methicillin
mcr-1	Polymyxins
QnrB, QnrA, Gyrase A D87N_GTT, Gyrase A S83L_TGG	Quinolones
VanB, VanA1, VanA2	Vancomycin

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NEGATIVE PATHOGENS
Staphylococcus epidermidis
Staphylococcus saprophyticus
Treponema pallidum (Syphilis)
Trichomonas vaginalis
Uncultured Megasphera 1
Ureaplasma urealyticum