NutriPATH
INTEGRATIVE PATHOLOGY SERVICES
P: 1300 688 522
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KARA MITCHELL
18-Mar-1988 Female

1 MORELIA WAY
WOOMBAH NSW 2469

-.JAYNE ELDER
PO BOX 9017
MOONEE BEACH NSW 2450

LAB ID : 3954457
UR NO. : 6635580
Collection Date : 02-Feb-2024
Received Date: 05-Feb-2024

3954457

Vaginal Microbiome Profile

Vaginal pH. 4.6 *H 3.5 - 4.5

Methodology: Testing performed by PCR, qPCR and MALDI-TOF

Opportunistic Bacteria	Result	Range	Units
Enterococcus faecalis:	<DL	< 1.0	x10^5 CFU/ml
Escherichia coli:	<DL	< 1.00	x10^5 CFU/ml
Klebsiella pneumoniae:	<DL	< 1.00	x10^5 CFU/ml
Proteus mirabilis:	<DL	< 1.00	x10^5 CFU/ml
Pseudomonas aeruginosa:	<DL	< 1.00	x10^5 CFU/ml
Streptococcus agalactiae:	<DL	< 1.00	x10^5 CFU/ml
Staphylococcus aureus:	<DL	< 1.00	x10^5 CFU/ml
Gardnerella vaginalis:	<DL	< 1.00	x10^5 CFU/ml
Atopobium vaginae:	<DL	< 1.00	x10^5 CFU/ml
Prevotella species:	<DL	< 1.00	x10^5 CFU/ml
Megasphaera species:	<DL	< 1.00	x10^5 CFU/ml
Ureaplasma species	<DL	< 1.00	x10^6 CFU/ml
Mycoplasma species	<DL	< 1.00	x10^6 CFU/ml

Sexually Transmitted Infections	
Trichomonas vaginalis:	Not Detected
Chlamydia trachomatis:	Not Detected
Neisseria gonorrhoeae:	Not Detected
Herpes Simplex Virus-1:	Not Detected
Herpes Simplex Virus-2:	Not Detected

COMMENT:
Not Detected results indicate the absence of detectable DNA in this sample. A negative result does not completely exclude infection.

Opportunistic Fungal pathogens			
Candida albicans:	<DL	< 1.00	x10^5 CFU/ml
Candida glabrata:	<DL	< 1.00	x10^5 CFU/ml
Candida krusei:	<DL	< 1.00	x10^5 CFU/ml
Candida parapsilosis:	<DL	< 1.00	x10^5 CFU/ml
Candida tropicalis:	<DL	< 1.00	x10^5 CFU/ml

Beneficial Bacteria:			
Total Lactobacillus:	0.02 *L	> 1.00	x10^6 CFU/ml
Lactobacillus crispatus:	0.01 *L	> 1.00	x10^6 CFU/ml
Lactobacillus gasseri:	<DL *L	> 1.00	x10^6 CFU/ml
Lactobacillus iners:	<DL *L	> 1.00	x10^6 CFU/ml
Lactobacillus jensenii:	0.01 *L	> 1.00	x10^6 CFU/ml
Lactobacillus rhamnosus:	<DL *L	> 1.00	x10^6 CFU/ml
Lactobacillus salivarius:	<DL *L	> 1.00	x10^6 CFU/ml
Lactobacillus vaginalis:	<DL *L	> 1.00	x10^6 CFU/ml

Bacterial Vaginosis:	
Bacterial vaginosis	Negative

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Vaginal Microbiome Comments

VAGINAL pH ELEVATED:
Vaginal pH can be elevated by the presence of pathogenic infection, blood, semen, vaginal medications, using certain soaps and douches. In the absence of the latter, an elevated pH may be the result of decreased serum oestradiol and is suggestive of menopause or hormone imbalance and may require further pathology investigation.
The typical vaginal pH is 3.5-4.5. Prepubertal and postmenopausal pH levels are normally >5 pH. With the increase of the oestrogen levels around puberty, the genital mucosa thickens and becomes colonized with Lactobacillus species which produce lactic acid and hydrogen peroxide to lower the pH below 4.5.
References:
Caillouette et. al., 1997, American Journal of Obstetrics and Gynaecology, 176(6)1270-1277.
Panda et. al., 2014, Journal of Mid-Life Health, 5(1):34-37.
Kaambo et. al., 2018, Front Public Health, 6:78.

LACTOBACILLUS:
Lactobacillus is the predominant genus in a healthy vaginal microbiota, and functions to inhibit the adhesion and proliferation of opportunistic and primary pathogens.
The presence of different Lactobacillus species is a major factor in the stability of the vaginal microbiome. Women with L. iners-dominant microbiomes are more likely to harbor Candida than women with L. crispatus-dominant microbiomes (due to higher production of lactic acid by L. crispatus compared to L. iners), leading to better anti-Candida activity (impeding Candida colonization) than L. iners through a greater production of lactic acid. Furthermore, L. iners dominance has been associated with other negative health outcomes such as increased risks of Chlamydia trachomatis infection, incident Bacterial Vaginosis and defects in vaginal mucus that compromise antiviral barrier function.

TOTAL LACTOBACILLUS LEVELS LOW:
Total Lactobacillus quantification should be >1x10^6 CFU/ml in a healthy Vaginal Microbiome. Production of H2O2 by Lactobacillus species is essential in inhibiting the overgrowth of pathogens. In cases where total Lactobacillus levels are low, presence of pathogenic bacteria should be reviewed and probiotic therapy should be considered. Microorganisms not belonging to the Lactobacillus genus with the population equal to or greater than 1× 10^5 CFU/ml is considered to be disturbing the vaginal ecosystem equilibrium.
References:
Pacha-Herrera et. al., 2020, Frontiers in Cellular and Infection Microbiology, 10:303.
Oerlemans et. al.,2020, Europe PMC, 10(11).
Tomusiak et. al., 2013, Polish Society of Gynaecologists, 84:352-358.

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Sex. Transmitted Infection Comments

TRICHOMONAS VAGINALIS – Not Detected:
This does not completely exclude the possibility of infection as is dependent on an adequate specimen collection. If you have symptoms, please consult with your healthcare practitioner.

CHLAMYDIA TRACHOMATIS – Not Detected:
This does not completely exclude the possibility of infection as is dependent on an adequate specimen collection. If you have symptoms, please consult with your healthcare practitioner.

NEISSERIA GONORRHOEAE – Not Detected:
This does not completely exclude the possibility of infection as is dependent on an adequate specimen collection. If you have symptoms, please consult with your healthcare practitioner.

HERPES SIMPLEX VIRUS Type 1 – Not Detected:
This does not completely exclude the possibility of infection as is dependent on an adequate specimen collection. If you have symptoms, please consult with your healthcare practitioner.

HERPES SIMPLEX VIRUS Type 2 – Not Detected:
This does not completely exclude the possibility of infection as is dependent on an adequate specimen collection. If you have symptoms, please consult with your healthcare practitioner.

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