NutriPATH
INTEGRATIVE PATHOLOGY SERVICES
P: 1300 688 522
E: info@nutripath.com.au

HILTON SINTON
16-Jan-2008 Male

44 ABBOTT ROAD
NORTH CURL CURL NSW 2099

-.MAEVE BEARY
13 ILUKA AVENUE
MANLY NSW 2095

LAB ID : 3640136
UR NO. : 6552911
Collection Date : 28-Oct-2019
Received Date: 30-Oct-2019

3640136

Clinical Notes: BROWN

GIT ASSESSMENTS

STOOL, SPOT	Result	Range	Units
CDSA Macroscopic Description			
Stool Colour	Brown		
Stool Form	Formed		
Mucous	NEG	< +	
Occult Blood	NEG	< +	
Macroscopy Comment	BROWN coloured stool is considered normal in appearance.		
CDSA Microscopic Description.			
RBCs (Micro)	NEG	< +	
WBCs (Micro)	0	< 10	
Food Remnants	++ *H	< ++	
Fat Globules	NEG	< +	
Starch	NEG	< +	
CDSA Digestive Markers			
Chymotrypsin	6.5	0.9 - 26.8	U/g
Short Chain Fatty Acids, Putrefactive	2.3	1.3 - 8.6	umol/g
Meat Fibres	NEG	< +	
Vegetable Fibres	++ *H	< ++	
Microscopy Comment			

FOOD REMNANTS PRESENT: Consider hypochlorhydria, pancreatic insufficiency, inadequate chewing.
Treatment:
- **Consider hydrochloride, digestive enzymes or other digestive aids**
- **Improve chewing**
- **Assess other CDSA markers such as pH, pancreatic elastase 1, H. pylori & other food fibres.**

Pancreatic Elastase 1	>500	> 200	ug/g
CDSA Absorption Markers			
Long Chain Fatty Acids	1.5	1.3 - 23.7	mg/g

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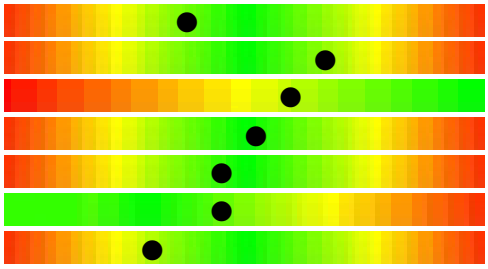
Digestive Markers Comment

VEGETABLE FIBRES & CELLS PRESENT:
An indirect indicator of maldigestion from insufficient chewing, gastric hypoacidity, decreased bile salts or diminished pancreatic output.

PANCREATIC ELASTASE: Normal exocrine pancreatic function.
Pancreatic Elastase reflects trypsin, chymotrypsin, amylase and lipase activity.
This test is not affected by supplements of pancreatic enzymes.
Healthy individuals produce on average 500 ug/g of PE-1. Thus, levels below 500 ug/g and above 200 ug/g suggest a deviation from optimal pancreatic function.
The clinician should therefore consider digestive enzyme supplementation if one or more of the following conditions is present:
Loose watery stools, Undigested food in the stools, Post-prandial abdominal pain, Nausea or colicky abdominal pain, Gastroesophageal reflux symptoms, Bloating or food intolerance.

CDSA Metabolic Markers

b-Glucuronidase	1767.1	337.0 - 4433.0	U/g	
pH	7.5	6.3 - 7.7		
Short Chain Fatty Acids, Beneficial	56.3	> 13.6	umol/g	
Butyrate	23.6	10.8 - 33.5	%	
Acetate	59.4	44.5 - 72.4	%	
Propionate	15.1	0.0 - 32.0	%	
Valerate	1.9	0.5 - 7.0	%	



Metabolism Comment

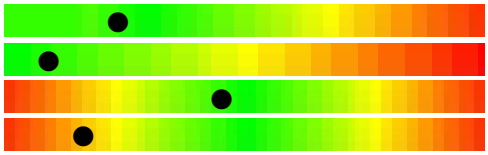
In a healthy gut Short Chain Fatty Acids are exhibited in the following proportions; Butyrate, Acetate, Propionate (16% : 60% : 24%)

VALERATE:
Valerate is a short chain fatty acid that is important for gut health. Although Acetate, propionate, and butyrate make up the the most abundant SCFAs in gastrointestinal tract (95%), Valerate and other SCFA's make up the remaining and work optimally when within range.

CDSA Inflammation Markers

CDSA Tumour/Ulcer Markers

H. PYLORI, Antigen	Negative			
Calprotectin	5.9	0.0 - 50.0	ug/g	
Eosinophil Protein X	3.6	< 7.0	ug/g	
Secretory IgA, Faecal	1119.0	400.0 - 2000.0	ng/mL	
Transglutaminase IgA	15.0	10.0 - 100.0	ug/g	



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Inflammation Comment

CALPROTECTIN Normal:
Faecal calprotectin values <50 ug/g are not indicative of inflammation in the gastrointestinal tract. Subjects with low faecal calprotectin levels normally do not need to be further investigated by invasive procedures.

FAECAL TRANSGLUTAMINASE IgA: Negative
Tissue Transglutaminase is the most specific test for Coeliac Disease.
Levels less than 100 are considered NEGATIVE.

Treatment:
No treatment required. However, If there is clinical suspicion of Coeliac disease consider testing serum Coeliac markers.
Also assess IgG/IgA Food sensitivity tests to identify specific food intolerances.

M2 Pyruvate Kinase	0.6	0.0 - 4.0	units/mL

Tumour/Ulcer Comment

H. PYLORI ANTIGEN:
This test, if POSITIVE, indicates the presence of a current infection and is not affected by the presence of other organisms, antacids, barium sulphate, blood or fat.
If the patient has diagnosed gastritis or a peptic ulcer consider:
• Standard triple therapy: eg. PPI, clarithromycin and amoxicillin/or metronidazole, 7-14 days
• Lactobacillus Probiotics

If the patient is asymptomatic consider natural products including:
• Black currant seed oil and fish oil
• Lactobacillus Probiotics
• Vitamin C
• Mastic gum.

M2-PYRUVATE KINASE: Negative
M2-PK values greater than 4 U/mL may indicate gastrointestinal adenoma, colorectal cancer or other gastrointestinal carcinomas.
Tumor M2-PK has a higher sensitivity than markers CEA and CA72-4, and M2-PK values greater than 4 U/mL may indicate gastrointestinal adenoma, colorectal cancer or other gastrointestinal carcinomas.
M2-PK has a lower sensitivity and specificity in diagnosing pancreatic cancer compared to Ca 19-9. However, in patients with adenocarcinoma there is a simultaneous increase of M2-PK and Ca 19-9. In addition, M2-PK is more commonly elevated in metastatic disease and may be an additional criterium to decide on radical surgery of pancreatic cancer.

PCR for CDSA	1		
CD Cycle No. Blasto	0.0	0.0 - 50.0	

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CD Cycle No. Dientamoeba	0.0	0.0 - 50.0	

GIT SENSITIVITIES

STOOL, SPOT	Result	Range	Units
Bifidobacteria	+++	++ - ++++	
Lactobacilli	+ *L	++ - ++++	
Escherichia coli	++++	++ - ++++	
Enterococci	+	+ - ++	
Campylobacter	NEG	< +	
Salmonella	NEG	< +	
Yersinia	NEG	< +	
Proteus	NEG	< +++	
Other Bacteria.	+++	< +++	
Candida albicans	NEG	< +	
Geotrichum spp	NEG	< +	
Rhodotorula spp	NEG	< +	
Other Yeasts	+ *H	< +	
Blastocystis Hominis	+ *H	< +	
Dientamoeba fragilis	+ *H	< +	
Cryptosporidium	NEG	< +	
Giardia lamblia	NEG	< +	
Entamoeba Histolytica	NEG	< +	
Other Parasites	NEG	< +	
Ampicillin	N/A		
Augmentin	N/A		
Ciprofloxacin	N/A		
Norfloxacin	N/A		
Meropenem	N/A		
Cephalothin	N/A		
Gentamycin.	N/A		
Trimethoprim/Sulpha	N/A		
Erythromycin	N/A		
Penicillin.	N/A		
Natural Agents			
Berberine	N/A		
Black Walnut	N/A		
Caprylic Acid	N/A		

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GIT SENSITIVITIES

STOOL, SPOT	Result	Range	Units
Citrus Seed	N/A		
Coptis	N/A		
Garlic-	N/A		
Golden seal	N/A		
Oregano	N/A		

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PATHOGEN SUMMARY

OTHER BACTERIA PRESENT:

Organism	Result	Range	Classification

The following group of organisms are deemed commensal, being neither beneficial or pathogenic. Where present, often inadequate levels of beneficial bacteria are also noted. These organisms may become dysbiotic at high levels where treatment may become necessary.

Bacteroides fragilis	3+	0 - 3+	Non-Pathogen
Staphylococcus aureus	2+	0 - 3+	Non-Pathogen
Streptococcus salivarius	3+	0 - 3+	Non-Pathogen
Streptococcus parasanguinis	2+	0 - 3+	Non-Pathogen

OTHER YEASTS PRESENT:

Organism	Result	Range	Classification
Fusarium oxysporum complex	1+	0 - 1+	Non-Pathogen

OTHER PARASITES PRESENT:

Organism	Result	Range	Classification
Blastocystis hominis	1+ * H	<1+	PATHOGEN
Dientamoeba fragilis	1+ * H	<1+	PATHOGEN

STAPHYLOCOCCUS AUREUS:

Sources:
Foods that require considerable handling during preparation or that are kept at slightly elevated temperatures after preparation are frequently involved in staphylococcal food poisoning.
The key foods associated with staphylococcal food poisoning include meat and meat products; poultry and egg products; salads such as egg, tuna, chicken, potato, and macaroni; bakery products such as cream-filled pastries, cream pies, and chocolate eclairs; sandwich fillings; and milk and dairy products.

Pathogenicity:
Food poisoning is often attributed to the staphylococcal enterotoxin.
The toxin produced by the bacteria is very heat-stable and therefore not easily destroyed by heat at normal cooking temperatures. The toxin can remain, despite the organism being destroyed. There is considerable variation in susceptibility to the enterotoxin in adults. Children and the elderly have the highest degree of susceptibility.

Symptoms:
Symptoms of staphylococcal food poisoning usually appear within 1 to 6 hours after ingestion. The individual response to the toxin may vary and depends upon the amount of contaminated food eaten, the amount of toxin ingested, and general health status.
Nausea, vomiting, abdominal cramping, and diarrhea are the most common symptoms. In more severe cases, headache, muscle cramping, and changes in blood pressure and pulse rate may occur. Recovery generally takes two days. It is not unusual for complete recovery to take three days and sometimes longer

Treatment:
In most cases, treatment for S. aureus infection is not necessary and complete recovery usually occurs after cessation of symptoms.

Other Herbal antimicrobials include:
Peppermint, Clove, Tea tree, Eucalyptus, Lemongrass, Ginger, Reishi, Red root, Quing Hao, Sida.

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STREPTOCOCCUS:

Description:
Streptococcus is a common isolate from gut flora. With the exception of very rare cases, streptococcus species are not implicated in gastric pathogenesis. However, there has been correlations with the presence of streptococcus pyogenes in patients who have, or have recently had scarlet fever. Streptococcus species are also implicated in urinary tract infections and faecal flora are the common source of contamination for urinary tract infections.

Sources:
Recent infections with streptococcus pyogenes or scarlet fever can be linked to the presence of this species in faeces.

Treatment:
Treatment of streptococcus in gut flora is not always recommended. A practitioner may take into consideration a range of patient factors and symptoms to determine if treatment is necessary.

BLASTOCYSTIS HOMINIS:
B. hominis has recently been reclassified as a protozoan, of which there are thought to be four separate serologic groups.

Sources:
This organism is transmitted via the fecal-oral route or from contaminated food or water. Prevention can be enhanced by improving personal hygiene and sanitary conditions.

Pathogenicity:
When this organism is present in the absence of any other parasites, enteric organisms or viruses, it may be considered the etiological agent of disease.

Symptoms:
Symptoms can include: diarrhea, cramps, nausea, fever, vomiting and abdominal pain. B. hominis has been associated with irritable bowel syndrome, infective arthritis and intestinal obstruction.

Treatment:
Currently, Metronidazole (Flagyl) is considered the most effective drug (750 mg tid x 10 days). Iodoquinol (Yodoxin) is also an effective medication (650 mg tid x 20 days). Recommended therapy can also eliminate G. lamblia, E. histolytica and D. fragilis, all of which may be concomitant undetected pathogens and part of patient symptomology.

DIENTAMOEBA FRAGILIS:
It is closely related to Histomonas and Trichomonas species. D. fragilis is known to cause non-invasive diarrheal illness in humans.90% of children are symptomatic, whereas only 15-20% of adults are. The most common symptoms associated with D. fragilis are intermittent diarrhea, fatigue, abdominal pain, fatigue, nausea, anorexia, malaise and unexplained eosinophilia. Diarrhea is predominately seen during the first 1-2 weeks of infection and abdominal pain may persist for 1-2 months.

Treatment:
Iodoquinol (650 mg tid x 20 days) or Tetracycline (500 mg qid x 10 days) or Metronidazole (500-750 mg tid x 10 days) have been used to treat D. fragilis. Another alternative is Paromomycin (500 mg tid x 7 days).

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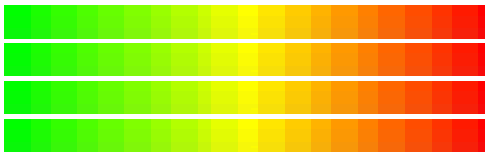
Citrobacter	**NEG**	< +++
Klebsiella	**NEG**	< +++
Pseudomonas	**NEG**	< +++
Streptococcus	**+++**	< +++



Tests ordered: CDSA3+,IMPEI

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