CHANTEL KEOGH

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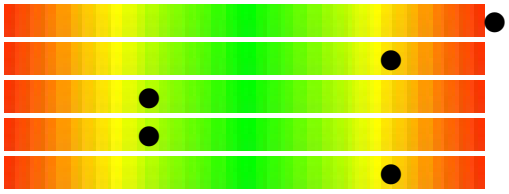
Date of Birth : 16-May-1993
Sex : F
Collected : 23/Nov/2021
Received: 01/Dec/2021
15 MIRAGE AVENUE
SPRINGFIELD LAKES QLD 4300
Lab id : **3784880** UR#: 6113592

WHAT THE NATUROPATH SAID
PO BOX 13
BALGOWLAH NSW 2093

ENVIRONMENTAL ANALYS

BLOOD - PLASMA	Result	Range	Units
Complement C3a	***2316.00* *H**	20.00 - 940.00	ng/mL
Complement C4a	**2788.00**	20.00 - 2830.0	ng/mL
TGF Beta-1	**272.0**	20.0 - 2380.0	pg/mL
Matrix Metallopeptidase 9	**116.00**	85.00 - 332.00	ng/mL
Vascular Endothelial Growth Factor	**84.00**	31.00 - 86.00	pg/mL



(*) Result outside normal reference range (H) Result is above upper limit of reference rang

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Biotoxins Comment

BIOTOXIN COMMENT:
Biotoxins are acquired into the body from toxin producing organisms via foods, water, air, or insect bites.
In the general population, biotoxins are removed from the body via the bloodstream, through the liver or alternatively broken down by the body's immune system and excreted out of the body. However, in patients who are genetically predisposed, biotoxins can remain within the body for lengthy periods of time, as they fail to mount an effective immune response to biotoxins. At this point, the innate immune system is observed to show signs of continuous but ineffective activation.

Chronic Inflammatory Response Syndrome (CIRS) is an illness caused by the poor clearance of biotoxins produced by certain moulds, algae and dinoflagellates. The neuroimmune, vascular and endocrine dynamics of CIRS may play roles in other forms of chronic illness including CFS, fibromyalgia, Lyme Disease, and MS.

ELEVATED C3a LEVEL:
C3a is an innate immune system activity marker.
Elevated levels of C3a are more suggestive of Lyme Disease as opposed to Moulds/Biotoxins exposure.
Elevated C3a causes chronic activation of complement.
Elevations lead to smooth muscle constriction, Capillary hyperperfusion and increased vascular permeability.

Elevated C3a levels may be corrected through use of high dose statins, however the patient should be pre-dosed and concurrently dosed with CoQ10.

NORMAL HIGH C4a LEVEL:
C4a has become the inflammatory marker of greatest significance when looking at innate immune responses in those with exposure to Water Damaged Buildings (WDB).
The complement system is a group of proteins that move freely through the bloodstream, playing a role in the development of inflammation.
Complements activate inflammatory responses, with spillover effect from the innate immune response to the acquired immune response and hematologic parameters.
These short-lived products are re-manufactured rapidly, such that an initial rise of plasma levels is seen within 12 hours of exposure to biotoxins, and sustained elevation is seen until definitive therapy is initiated.
C4a levels rise rapidly and represent an excessive response to moulds/biotoxin presence.
By C4a activating mast cells and basophils, increasing smooth muscle contraction (in blood vessels and intestines), leads to increased vascular permeability and mitochondrial dysfunction.
The elevated C4a levels cause a decreased blood flow into the small vessels called capillaries, which impacts the brain causing decrease in the patient's cognitive ability.
Thereafter the manifestation of common CIRS symptoms like breathing difficulty, fatigue, and dysfunction in thinking and memory processes (cognitive ability) arise.

Consider testing for possible Tick-borne infection or autoimmune condition.

Tests ordered: CFee,IMPEI,VEGF,TGFB1,C3a,C4a,MMP9
(*) Result outside normal reference range (H) Result is above upper limit of reference rang