Ganglioside IgG Antibody,serum

Test Description	Observed Value	Reference Range	Disease association
GM1	Negative	Negative	Multifocal motor neuropathy (40-70%), Guillian Barre syndrome (22-30%)
GM2	Negative	Negative	Multifocal motor neuropathy, Guillian Barre syndrome & variants
GM3	Negative	Negative	Multifocal motor neuropathy
GD1a	Negative	Negative	Guillian Barre syndrome & variants
GD1b	Negative	Negative	Sensory neuropathy
GT1b	Negative	Negative	Guillian Barre syndrome & variants
GQ1b	Negative	Negative	Miller Fisher syndrome(90%)

Method - Immunoblot (Sample screening dilution is 1:51) - the assay detects IgG antibodies against seven gangliosides

Reema

Dr. Reema Agrawal
MD (Pathology)

Investigation	Observed Value	Unit	Biological Reference Interval
Multiple Sclerosis Profile, Maxi			
CSF Index (CSF and serum)			
IgG, CSF (CSF,Nephelometry)	2.1	mg/dL	0.0-3.4

Interpretation note :

Local immune reactions with the central nervous system result in elevated immunoglobulin levels, particularly IgG, in the cerebrospinal fluid.
Elevated synthesis of IgG in central nervous system aids in diagnosis of inflammation and autoimmune disease in CNS eg.Multiple sclerosis.

IgG Total (Serum,Immunoturbidimetry)	1186	mg/dL	700-1600 Please note change in Reference range and method

Interpretation :

1. Decreased levels are seen in primary immunodeficiency conditions and in secondary immune insufficiencies like advanced malignant tumours, lymphatic leukemias, multiple myeloma and Waldenstrom`s disease.
2. Increased concentrations occur due to polyclonal or oligoclonal immunoglobulin proliferations seen in hepatic disease, acute/chronic infections and autoimmune disease.

Albumin, CSF (CSF,Nephelometry)	13.7	mg/dL	0-35
Albumin (Serum,Bromocresol green)	3.58	g/dL	3.5-5.2 Please note change in Reference range
Albumin Index (Calculated)	3.83		0.0-9.0
IgG-Albumin Ratio (CSF)	0.150		0.09-0.25
CSF IgG Index (Calculated)	0.460	Index	0.28-0.66

Interpretation :

Cerebrospinal Fluid (CSF) IgG Index

1. Elevation of IgG levels in the cerebrospinal fluid (CSF) is seen in patients with inflammatory diseases of the central nervous system (multiple sclerosis [MS], neurosyphilis, acute inflammatory polyradiculoneuropathy, subacute sclerosing panencephalitis) due to intrathecal synthesis of IgG.
2. Diagnostic laboratory tests for MS are CSF index and oligoclonal banding. The CSF index is the CSF IgG to CSF albumin ratio compared to the serum IgG to serum albumin ratio. The CSF index is, therefore, an indicator of the relative amount of CSF IgG compared to serum. Any increase in the index is a reflection of IgG production in the CNS. The index is independent of the activity of the demyelinating process.
3. The IgG synthesis rate is a mathematical extrapolation from the CSF index data and used as a marker for CNS inflammatory diseases.
4. Cerebrospinal Fluid (CSF) IgG index is elevated in approximately 80% of patients with multiple sclerosis (MS). The use of CSF index plus oligoclonal banding has been reported to increase the sensitivity to over 90%.

Reference : Jacques Wallach, M.D. 6th Edition

Dr. Varsha Birla
MD, DNB (BIOCHEMISTRY)

MEHA KAKAR

PID NO: P542100621117

Age: 53.0 Year(s) Sex: Female

Reference: Dr.SELF

Sample Collected At:
360 diagnostic & health services pvt ltd C1/2 sec 31 noida 201301
PROCESSING LOCATION:- Metropolis Healthcare Ltd, Unit No. 409- 416, 4th Floor, Commercial Building-1, Kohinoor Mall, Mumbai-70

VID: 54213150448374

Registered On:
28/07/2021 12:26 PM
Collected On:
29/07/2021 3:09AM
Reported On:
03/08/2021 04:17 PM

Investigation	Observed Value	Unit	Biological Reference Interval

Dr. Varsha Birla
MD, DNB (BIOCHEMISTRY)

Investigation	Observed Value	Biological Reference Interval
Anti MAG (Myelin associated Glycoprotein) Ab (Serum,Indirect Immunofluorescence)	Negative	Negative

Sample screening Dilution - 1:10

Interpretation -
Detection of MAG antibodies is associated with demyelinating sensorimotor neuropathies associated with multiple sclerosis, inflammatory neuropathies, and motor neuron diseases

Dr. Varsha Birla
MD, DNB (BIOCHEMISTRY)

Investigation	Observed Value	Biological Reference Interval
Oligoclonal band,CSF		
CSF Pattern (CSF,Electrophoresis)	NO BAND	NO BAND
Serum Pattern (Serum,Electrophoresis)	NO BAND	NO BAND
Interpretation (Serum)	NORMAL PATTERN	NORMAL PATTERN

Method: Isoelectric Focusing

Note: To assure comparative interpretation, it is imperative that the CSF and serum sample must be collected at the same time, from the same patient.

Interpretation:
The intrathecal synthesis, within the central nervous system (CNS) is indicated by the presence of IgG band in the immunofixation pattern of CSF that are not in the serum pattern from the same patient.

It should be noted that the number of bands in the oligoclonal patterns does not correlate with the diagnosis of the disease nor with its severity and prognosis.

5 patterns are defined as follows :-

1. No bands seen in CSF and serum :- Normal pattern
2. Oligoclonal band in CSF unrepresented in serum :- Intrathecal synthesis
3. Oligoclonal band in CSF and serum but numerous bands in CSF :- Intrathecal synthesis
4. Same oligoclonal bands in CSF and serum (mirror pattern) :- No intrathecal synthesis
5. Same monoclonal component in CSF and serum (split in several bands by IEF procedure) :- No intrathecal synthesis.

Observed CSF OCB pattern with corresponding absence in serum.	Suggested Interpretation & disease association
More than 10 bands	Highly specific(99%) for MS. But only 46% of MS show this classical pattern.
Between 3 to 10 bands	Associated with specificity(96%)& sensitivity (85%) for MS
1 to 3 bands	About one third of patients- often evolve into classical pattern of MS; While the remaining are often associated with other non-demyelinating conditions & often revert to normal on follow up.

Reference-

- Freedman MS et al. Recommended standard of cerebrospinal fluid analysis in the diagnosis of multiple sclerosis: a consensus statement.Arch Neurol2005;62(6):86 5-70
- Davies G et al. The clinical significance of an intrathecal monoclonal immunoglobulin band: A follow-up study. Neurology 2003; 60(7):11 63-6.

-- End of Report --

Dr. Varsha Birla
MD, DNB (BIOCHEMISTRY)