



研究用

EUROLINE Anti-Gangliosides Profile 2 (IgG/IgM)

Sensitivity and specificity: In the sera of clinically characterised patients with Guillain-Barré syndrome (GBS, n = 71), chronic inflammatory demyelinating polyneuropathy (CIDP, n = 13), multifocal motor neuropathy (MMN, n = 18) or Fisher syndrome (FS, n = 5) and in the sera of healthy blood donors (n = 60) antibodies against gangliosides of class IgG and IgM were investigated.

Prevalences of autoantibodies against gangliosides (%):

Patient group	Ig class	GM1	GM2	GM3	GD1a	GD1b	GT1b	GQ1b
GBS (n = 71)	IgG	6	1	0	0	1	0	1
	IgM	13	10	1	1	3	3	1
CIDP (n = 13)	IgG	0	0	8	0	0	0	0
	IgM	0	8	15	23	8	0	0
MMN (n = 18)	IgG	0	6	6	0	0	0	0
	IgM	28	22	17	11	11	6	0
FS (n = 5)	IgG	0	0	0	0	0	0	80
	IgM	0	0	0	0	0	0	0
Blood donors (n = 60)	IgG	0	0	0	0	0	0	0
	IgM	3	15	0	0	0	0	0

Meyer W. et al., Autoimmunity reviews 1: 71 (2002)

Clinical significance

Diseases associated to autoantibodies against the antigens used in the test [1]:

Antibodies against	Ig class	Associated disease
GM1	M	Multifocal motor neuropathy
GM1, GD1a, GT1b	A, G, M	Guillain-Barré syndrome
GQ1b	G	Fisher syndrome
GD1b	G	Sensory neuropathy

Antibodies against the monosialoganglioside GM1 are associated with **multifocal motor neuropathy (MMN)** with a prevalence of 40 to 70%. These antibodies are in most cases of class IgM. Furthermore elevated antibody titers **against the monosialoganglioside GM1** occur in patients with **Guillain-Barré syndrome** in 22 to 30% of the cases. The titer correlates with the disease activity. In the acute phase the titer increases to a maximum value and decreases during the disease.

Antibodies against the disialoganglioside GD1b have been described in rare cases of patients with sensory neuropathy.

Antibodies against the tetrasialoganglioside GQ1b can be detected in more than 90% of the patients with **Fisher syndrome**.

Literature references

1. Heidenreich F. **Autoantibodies associated with peripheral neuropathies**. In Conrad K. et al.; Pathogenic and diagnostic relevance of autoantibodies. Report on the 4th Dresden Symposium on Autoantibodies held in Dresden on October 21-24, 1998, Pabst Science Publishers, Lengerich (1998).
2. Pestronk A, Choksi R. **Multifocal motor neuropathy**. Neurology 49: 1289-1292 (1997).
3. Koski CI. **Characterization of complement-fixing antibodies to peripheral nerve myelin in Guillain-Barré syndrome**. Ann. Neurol. 27 Suppl: S44-7 (1990).
4. Daune GD, Farrer RG, Dalakas MC. **Sensory neuropathy associated with monoclonal immunoglobulin M to GD1b ganglioside**. Ann. Neurol. 31:683-685 (1992).
5. Meyer W, Schneider B, Nobile Orazio E, Klotz M, Schlumberger W, Stöcker W. **EUROLINE Anti-Ganglioside-Profile: A new membrane test for detection of antibodies against gangliosides**. Autoimmunity reviews 1: 71 (2002).