Lymphocyte subset in blood is the helpful tool for distinguishing autoimmune peripheral neuropathy from cervical spinal canal stenosis, disk hernia, amyotrophic lateral sclerosis.

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Introduction

Cervical spinal canal stenosis, disk hernia, myelopathy , amyotrophic lateral sclerosis (ALS), traumatic nerve injury are often misdiagnosed in autoimmune peripheral neuropathy patients.

We looked for helpful tools for differential diagnosis, and found the lymphocyte subsets in the blood.

Methods

We show the six cases which were misdiagnosed by other facilities as ALS, myelopathy, disc hernia through conventional study. By using combination of careful physical neurological examinations and extended nerve conduction study, these patients were diagnosed as peripheral neuropathy such as multifocal motor neuropathy (MMN).

We examined lymphocyte subset in their blood and obtained abnormal data.

In autoimmune neuropathy, antibodies and cytokines play an important roll. Lymphocyte subsets represent underlying such immunoreactions due to antibodies and cytokines.

CD3 : mature T lymphocyte
CD19 : B cell
CD4 : helper T cell
CD8 : cytotoxic T cell
CD2 : natural killer cell
CD56 : natural killer cell

Results

	Normal Range	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6
CD3	51-83%	41	55			69	65
CD19	5-19%	29	10			5	14
CD4	29-60%	27	30	38	61	33	24
CD8	20-46%	17	38	19	19	41	45
CD4/CD8	1.0-2.6	1.59	0.79	2.0	3.21	0.80	0.53
CD2	73-89%	53	78			88	84
CD56	8-32%	21	36			22	25
Correct diagnosis		MMN	MMN	MMN	MMN	vasculitis	neuritis
Previous diagnosis		ALS	Isaacs syndrome	myelopathy	myelopathy	disc hernia	trauma
Age/sex		51/M	74/M	72/M	76/F	38/M	31/F

Conclusion

Lymphocyte subset in blood is the helpful and novel tool for diagnosis of autoimmune neuropathy, especially of multifocal motor neuropathy.

References

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No conflict of interest.