Letters to the Editor should be typed doubled-spaced (including references) with conventional margins. The overall length is limited to five manuscript pages, including not more than one figure or one table.

Oligoclonal Bands Are Found In Electrophoretograms of Serum of Patients with Multiple Sclerosis

To the Editor:

A recent paper (1) describing oligoclonal banding in CSF indicates that it is necessary to electrophorese paired CSF and serum specimens simultaneously, to differentiate oligoclonal banding caused by intrathecal immunoglobulin production from increased permeability of the blood–CSF barrier. This dogma is not correct, as it has been shown by use of polyacrylamide gel isoelectric focusing and Coomassie Brilliant Blue staining or agarose gel electrophoresis that 74% and 9%, respectively, of patients with multiple sclerosis having oligoclonal bands in the CSF patterns also had bands in the corresponding patterns for serum (2). These bands were not seen in patterns for normal CSF and normal serum (2).

We have investigated the frequency of oligoclonal banding in sera of patients with multiple sclerosis by using agarose isoelectric focusing, staining with silver. In our group of 12 patients with multiple sclerosis, bands were present in the sera of 11. Paired electrophoretograms of CSF and serum showed that the oligoclonal bands in both had identical electrophoretic mobilities.

Just why the oligoclonal bands are present in the patterns for sera of patients with multiple sclerosis has not been determined, but if the criterion of oligoclonal bands in CSF and not in serum is used to determine clinical significance, this may lead to false-negative results.

References


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Modifications in a Method for Vanillylmandelic Acid in Urine

To the Editor:

We recommend several modifications to our recently published (1) method for determination of vanillylmandelic acid (VMA) in urine. Although the method usually works well as described, we and others (personal communications, 1985) noticed batch-to-batch variations in the analytical columns, in terms of efficiencies (plate count), retention times, and longevity. Because good efficiency and reproducible selectivity is required for VMA to be resolved from earlier-eluting peaks, we now use a 4.6 x 150 mm column of 5-μm Altex Ultrasphere C18 for the reversed-phase analytical separation.

We use mobile phase consisting of 100–150 mL of methanol and 850–900 mL of phosphate buffer (pH 3.5, 0.1 mol/L) per liter, with 2 mmol of Q3 (Regis Chemical Co. brand of N-triethyloctylammonium phosphate) ion-pair agent per liter. This mobile phase differs from that described previously only in that 100 to 150 mL of methanol is used per liter instead of 40 mL. Retention times for VMA and isovanillylmandelic acid are 4.0 and 5.6 min, respectively, when a 150 mL/L methanol mobile phase is delivered at 1.5 mL/min.

Several commercially available 10-μm C18 reversed-phase packings should be suitable for packing the 5 x 30 mm minicolumns used for the preliminary purification of urine samples. Based on their retention characteris-

ics (2), the following are possible alternatives to the 10-μm Bondapak packing previously used to pack the minicolumns: Nucleosil C18, Supelcosil C18, Hypersil SAS, Partisil ODA, and Brownlee RP18 (LiChrosorb). We tried several solid-phase absorption cartridges for the preliminary purification step but none sufficiently retained later-eluting peaks.

We continue to use the method, with no problem other than the aforementioned inconsistencies of the analytical columns, and we can now report a day-to-day CV of 4.9% (6.60 ± 0.32 μg/mL, n = 14) for aliquots of a quality-assessment sample tested during 10 months.

References

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Poor Performance of the Baker Nephelometer and Reagents

To the Editor:

We would like to report our experience with and problems in the use of the Baker 420 laser nephelometer and its reagents (Baker Instruments Corp., Allentown, PA 18103) for measurement of specific proteins. This system assay proteins and drugs by monitoring polymer-enhanced antigen–antibody complex formation at antibody excess, by use of kinetic or end-point nephelometry. Our problems surfaced soon after installation of the instrument (serial no. 249) and test runs in April 1984, when most of the manufacturer's antisera to IgG, IgM, IgA, C3, C4, haptoglobin, and α2-macroglobulin exhibited background light scattering 1.6 to 5.0 times above the maximally allowable QC limit of 150 light scattering units. Unacceptably high back-