for all calibrators used to set the Reflotron Total Cholesterol Assay calibration (8). It was demonstrated that this recalibration made the Reflotron values (when serum was assayed) comparable with serum cholesterol values obtained with the manual Abell–Kendall Reference Method.

The degree of accuracy was also examined in whole blood (9) and we found it to be satisfactory, as long as one does not use blood treated with EDTA for the Reflotron assay.

Whether a calibration that is basically accurate makes all reagent lots equally accurate depends on the quality limits allowed by the manufacturer. If, for instance, lots of reagents are released that have been tested to yield cholesterol values within ±4% (an arbitrary figure) from a pre-set target, then lot-to-lot variation of as much as 8% is possible. When there is some instrument-to-instrument variation as well [we found 2% (8)], the expected between-laboratory differences become even larger. One such recent finding was a −1.8% to +6.8% difference (10). So, although the quality of Reflotron total cholesterol measurements can be quite satisfactory, improving on the between-reagent-lots variability would seem to be a useful goal.

References

Fourth, in many screening operations, finger-stick blood samples are used. Such samples ordinarily are drawn into capillary tubes in which heparin is the anticoagulant. Heparin exerts little osmotic effect and, assuming the equivalence of finger-stick and venous samples, cholesterol values for heparinized plasma would be expected to reflect values for serum.

The main difference between the linear-regression statistical procedures we reported and those described in reference 7 of Dr. Boerma’s Letter is that we reported standard procedures in which it is assumed that there is no measurement error for the reference method, whereas the latter allows for measurement error for both laboratory methods. We performed the analyses with both types of statistical procedures; however, the differences between the two were small, and we elected to report the results based on the more familiar procedures.

The Reflotron does not provide total cholesterol measurements below 1000 mg/L, which indeed limits the confidence of the y-intercept estimate, because it required extrapolation over a wide concentration range.

As Dr. Boerma and several other investigators have reported, the accuracy of the Reflotron was improved after the manufacturer took steps to base the calibration of the method on the Centers for Disease Control (CDC) Reference Method. Our study began in 1987 (not 1988) before this had been accomplished, and our initial findings may indeed have contributed some impetus to link the calibration of the Reflotron to the CDC Reference procedure. Because the recalibrated strips became available before our study had been completed, we decided to include our data obtained with both the original and CDC-referenced test strips.

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Pseudohypermotremia and Increased HCO₃⁻ in Serum Preserved with Sodium Azide

To the Editor:

A patient, resident in Kenya, was diagnosed as having myeloma and came temporarily to the U.K. for treatment. Subsequently, serum samples were sent from Kenya to monitor