suggestive of C-cell hyperplasia. Because in our institution the lowest increase thus far during a PGS in members of a MEN II family was 400 ng/L (C-cell hyperplasia confirmed after surgery), there still exists a borderline value that separates normal subjects from patients. The reason for the unexpected increase in our control group (inhabitants of an iodine-deficient area) is now under investigation, but we wish to report this phenomenon so that it can be taken into account in the diagnosis of MEN II and when surgical intervention is considered.

References

Four Methods Compared for Determining Plasma Creatinine with the Monarch Centrifugal Analyzer

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I compared the creatinine method of the Technicon (Tarrytown, NY) SMAC 2, based on alkaline picrate with dialysis, with four creatinine methods of the Monarch [Instrumentation Laboratory (IL), Lexington, MA] centrifugal analyzer. Of the two kinetic alkaline picrate assays, one involved IL reagent and reaction conditions, and the other was optimized to minimize bilirubin interference by decreasing the reading interval and increasing the picrate concentration to 35 mmol/L (I). Enzymatic creatinine assays from BCL and Wako were modified for the Monarch. Both assays make use of creatinase, creatinase, sarcosine oxidase, and peroxidase, but they differ with respect to reading wavelength, incorporation and nature of phenol derivative, and the addition of ascorbic acid oxidase and potassium ferrocyanide to the Wako reaction. Both kits were reconstituted with 80% of the volume specified by the manufacturers, to accommodate sample and reagent dilutions on the Monarch. The "load, spin, reload, (c) incubate, analyze" facility was used on the Monarch, as in other studies (2), to have the sample pre-incubation with creatinase precede the other reactions and to ensure that all samples are in contact with each reagent for identical times.

Between-batch imprecision of the kinetic picrate methods at 100 and 400 μmol/L (CV 2.28-4.56%) was better than in the enzymatic assays (CV 4.53-8.33%). Analytical recovery studies and comparisons with patients' samples showed that calibration with plasma is inappropriate for enzymatic creatinine assays, resulting in 10% to 20% over-recovery. Use of aqueous calibrants yielded analytical recoveries of creatinine between 97.8% and 99.6%.

Glycine, taurine; sodium salts of cholic, deoxycholic, and chenodeoxycholic acids; and biliverdin did not interfere in any assay. Acetoacetate, 1 to 20 mmol/L, gave an increasing positive interference in the SMAC (3) and the modified kinetic picrate method (4) but had a negligible effect in the IL picrate method and none in either enzymatic assay. All assays were studied in the presence of bilirubin, 50 to 500 μmol/L (Figure 1), which gave a marked negative interference in the BCL method, as in other peroxide-detection systems (5). The inclusion of potassium ferrocyanide and the longer reading wavelength for the Wako method probably account for the reduced interference by bilirubin in that method.

References

Chemiluminescence and Radioimmunology Compared for 10 Allergens

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Patients with Type 1 allergy typically have increased titers of total IgE and allergen-specific IgE, both cell-bound and circulating in the blood (1), consistent with the cause of their particular allergy. The clinical diagnosis of allergy is supported by demonstrating the presence of allergen-specific IgE antibodies in patients' sera (2, 3).

Recently a chemiluminescent immunoassay kit for measuring specific IgE has been introduced commercially (Ciba Corning Magic Lite System). This immunoassay involves