

The urine lysozyme concentrations in patients with renal interstitiopathy and renal vasculopathy are (near) normal except in renal failure.

Patients with glomerulopathy may have a reversible lysozymuria in nephrotic syndrome.

The results suggest that the measurement of lysozymuria has only limited use as an indication of tubular function, especially in patients with renal failure; in addition, the factors causing "overflow" need to be analysed.

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Clinical Usefulness of Alanine Aminopeptidase in Patients with Renal Failure

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Alanine aminopeptidase (EC 3.4.11.2) is proposed as an aid in the determination of the type and course of renal failure.

Alanine aminopeptidase was measured on eight hour overnight urine in 64 patients with renal diseases and 25 controls. Of these 23 were with an acute "uraemic" episode and another 4 were in the terminal stage of a renal disease (dialysis dependent).

Alanine aminopeptidase has been suggested as an aid in the differentiation and follow-up of acute "uraemic" episodes during renal failure. Normal values in acute episodes were not found. It suggests that elevated alanine aminopeptidase activity in renal failure may be expected in the presence of acute tubular damage. Alanine aminopeptidase excretion varied from (2.0) 3.0 to 20.0 U/mmol creatinine. In contrast in patients on chronic dialysis it was below 1.0 U/mmol creatinine, which is probably a sign of impaired synthesis.

Alanine aminopeptidase in the urine has been shown to be a suitable parameter for the clinical judgement of patients with renal failure.

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Glycosylated Haemoglobin Levels in Normal and Diabetic Chinese

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Four different micro-column methods were used for the determination of glycosylated haemoglobin (HbA₁): a self-prepared reusable column (A) and three commercial kits, Biomedix (B), Bio-Rad (C) and Isolab (D). The within-run and day-today precision for method A were determined as n = 10, \bar{x} = 8.5%, CV = 1.3% and n = 10, \bar{x} = 7.7%, CV = 5.4%, respectively. The withinrun CV (\bar{x} = 7.4%) of method B, C & D were 3.8%, 3.1% & 5.8%, respectively. The reference range of HbA₁ for normal Chinese was estimated to be 5.0–9.0%, determined samples from 50 "healthy" Chinese non-diabetics with fasting blood glucose < 6.11 mmol/l. The mean HbA₁ value (8.7–10.1%) determined on 50 Chinese diabetes mellitus patients (fasting blood glucose 5.00–15.88 mmol/l) was significantly higher than the reference mean (p < 0.001) of each individual method. There was no significant difference between the mean values determined by different methods, except that determined by method B was less than that by method A (p < 0.001). The correlation coefficients of these comparisons were between 0.833 and 0.565. The fasting blood glucose and the HbA₁ value determined by different methods correlated well (r = 0.616–0.727). The result indicates that the HbA₁ determination may be useful for monitoring metabolic control of diabetes mellitus in Chinese. Currently, we are evaluating the method from Leeco Diagnostic, Inc. (U.S.A.).

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The Use of High Performance Liquid Chromatography (HPLC) in the Study of the Kinetics of Uptake of 5-Fluorouracil

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The uptake of 5-fluorouracil by rat liver and kidney was studied using an HPLC method for estimation of 5-fluorouracil after extraction of the tissues (1).

Slices of rat liver and kidney weighing 15–30 mg were cut (2) and incubated at 37 °C for 2 minutes in solutions of 5-fluorouracil in Tris buffer pH 7.4.