Selected Abstracts

Urinary Diagnostic Indices in Acute Renal Failure
T. R. MILLER et al. (R. J. ANDERSON, Univ. of Colorado Medical Centre, Denver, CO 80262) Ann. Intern. Med. (July), 1978.

A prospective analysis of the value of urinary diagnostic indices in ascertaining the cause of acute renal failure was undertaken. In the setting of acute oliguria a diagnosis of potentially reversible prerenal azotemia is likely with urine osmolality > 500 mosm/kg H_2O, urine sodium concentration < 20 meq/L, urine/plasma urea nitrogen ratio > 8, and urine/plasma creatinine ratio > 40. Conversely, a urine osmolality 350 mosm/kg, urine sodium concentration > 40 meq/L, urine/plasma urea nitrogen ratio < 3, and urine/plasma creatinine ratio < 20 suggest acute tubular necrosis. A significant number of oliguric patients will not have urinary indices that fall within these guidelines. In this setting, urine sodium concentration divided by the urine:plasma creatinine ratio (the renal failure index) and the fractional excretion of filtered sodium provide a reliable means of differentiating reversible prerenal azotemia from acute tubular necrosis.

Renal Failure in Otherwise Uncomplicated Acute Viral Hepatitis. S. P. WILKINSON et al. (King's College Hosp., London, England) Br. Med. J., 2:338-341 (July 29), 1978.

Renal failure occurred in 12 patients with otherwise uncomplicated acute viral hepatitis (two were HBsAg positive). Apart from dehydration due to repeated vomiting in one patient, no factor responsible for precipitating renal failure could be identified. The clinical course was characterized by renal failure with plasma urea concentrations reaching maximum values of 26 to 69 mmol/L and dialysis became necessary for ten patients for upto two weeks. Seven patients recovered completely, the other five died from sepsis. The types of renal failure were similar to those described in fulminant hepatic failure and cirrhosis namely, functional renal failure 5 cases and acute tubular necrosis 9 cases). Two patients with functional renal failure later progressed to tubular necrosis.

Does Adipocyte Hypercellularity in Obesity Exist?
R. T. JUNG et al. (Dunn Nutrition Unit, Cambridge, England) Br. Med. J., 2:319-321 (July 29), 1978.

Adipose tissue samples were biopsied from three subcutaneous sites in 80 obese and 27 non-obese patients, 44 of whom had additional samples taken from intra-abdominal

sites. There was a small increase in the calculated number of fat cells in the more obese patients but there was no relation between fat cell number and obesity of childhood onset. Omental fat cells were one-third the size of the subcutaneous cells. Thus the usual calculation of fat cell number, based solely on subcutaneous samples, underestimates the true adipocyte number and the majority of obese patients can accommodate their fat without needing to recruit new cells. The diagnosis of "hyperplastic" obesity is unreliable and its relation to infantile obesity doubtful.

Abnormal Carbohydrate Metabolism in Chronic Renal Failure. S. RUBENFELD and A. J. GARBER (Baylor College of Medicine, Houston, TX 77030) J. Clin. Invest., 62:20-28 (July), 1978.

Patients with chronic renal failure demonstrated increased glucose production and utilization, increased gluconeogenesis from alanine, increased alanine production and utilization, and a relative impairment to glucose disposal. Chronic azotemia is characterized by increased rates of glucose precursor flux and by a relative impairment to glucose disposal. These findings may suggest an underlying hepatic and peripheral insensitivity to the metabolic action of insulin in patients with chronic renal insufficiency.

Recognition of Depressive Disorder in Children. J. R. PEARCE (Guy's Hosp., London, England) J. R. Soc. Med., 71:494-500 (July), 1978.

A study of 547 children aged between 3 and 17 years, attending a child psychiatric clinic, showed that 23% had symptoms of morbid depression. This group was compared with a control group without depression from the same clinic. The depressed children had a number of symptoms which formed a characteristic pattern of symptoms that could be defined as a specific depressive disorder.

Sinus Arrhythmia in Acute Myocardial Infarction. M. M. WOLF et al. (D. HUNT, The Royal Melbourne Hosp., Parkville, Victoria, Australia) Med. J. Aust., 2:52-53 (July 15), 1978.

Sinus arrhythmia, defined by calculating variance of the R-R interval on admission to hospital, was present in 73 of 176 patients admitted to a coronary care unit with acute myocardial infarction. These patients had a lower hospital mortality. They tended to have a higher incidence of inferior infarction and a lower incidence of anterior infarction, and to have smaller infarcts as measured by the Norris index. The main difference between patients with sinus arrhythmia related to heart rates on admission to hospital, those with sinus arrhythmia having slower heart rates at that time.

BCG Therapy in Acute Nonlymphoid Leukemias. H. VUYAN et al. (Hospital Edouard Herriot, Lyons, France) Scand. J. Haematol., 21:40-46 (July), 1978.

The survival of patients with acute nonlymphoid leukemias receiving chemotherapy (32 patients) or chemotherapy plus BCG (31 patients) was compared in a randomized trial which started in November 1974. Fresh BCG (Institute Pasteur, Paris) was administered by Heaf gun in the interval of chemotherapy cycles. The overall survival was better in the chemoimmunotherapy group (medium duration of survival 25 months compared with 16 months in the chemotherapy group). However, the first remission duration did not differ (median duration 15 and 12 months, respectively). Plateau survival curves were not obtained in either group. A second complete remission was obtained in seven of 12 patients with bone marrow relapses in the chemoimmunotherapy group and only in two of 15 in the chemotherapy group (P. .05).

Severity of Coronary Atherosclerosis Related to Lipoprotein Concentration. P. J. JENKINS et al. (Baker Medical Institute, Melbourne, Australia) Br. Med. J., 2:388-391 (Aug. 5), 1978.

The influence of individual lipoproteins on the severity of coronary atherosclerosis was studied in 41 patients undergoing coronary angiography. The extent of atherosclerosis was quantified by a coronary atherosclerotic score (CAS) based on the number and severity of lesions in eight proximal segments of the coronary circulation. The concentration of high density lipoprotein (HDL) showed a strong inverse association with CAS which was independent of the effects of age and other lipoproteins. On multivariate analysis concentrations of other lipids-total plasma cholesterol, low density lipoprotein (LDL) cholesterol, and the combined effect of LDL cholesterol plus VLDL triglyceride, showed direct, significant correlations with CAS but these were weaker than that of HDL. Several circulating lipoproteins are related to the severity of coronary atherosclerosis, HDL having an apparent retarding effect. These findings partly explain the influence of the lipoproteins on the development of clinical coronary heart disease.