Abstracts of Current Literature

Experimental and Clinical Observations on Poldine in Treatment of Duodenal Ulcer. J. E. Lennard-Jones. *Brit. M. J.*, 1: 1071, 1961.

The anticholinergic drug poldine methosulphate has been shown to reduce the secretion of gastric acid.

In a small controlled trial no benefit could be demonstrated from the use of the drug in duodenal ulcer.

Poldine methosulphate, even when given in doses large enough to produce the severe side effects of parasympathetic inhibition, did not reduce the gastric acidity of duodenal ulcer patients taking a bland diet. Acidity was reduced when hourly drinks of milk without other food was taken.

Poldine augmented the effect of a regular daytime antacid but did not prolong the effect of a dose of alkali at bedtime.

There is a useful discussion about the technic of demonstrating the effect of antisecretory drugs.

F. E. HYTTEN

Alimentary Lipaemia and Ischaemic Heart Disease. I. A. D. Bouchier and B. Bronte-Stewart. *Lancet*, 1: 363, 1961.

An oral butter fat test was performed on 146 men; twenty-nine patients with ischemic heart disease and 117 control subjects from the three racial groups in Cape Town. The test consisted of a breakfast containing 70 gm. butter fat given after a twelve hour fast with plasma lipemia (optical density) measured at two, four, six and seven and a half hours. The lipemia was greater and lasted longer in the patients. No racial or age differences were demonstrated.

In seven patients with heart disease and seven control subjects the results of the oral test were compared with those of an intravenous fat tolerance test. While the characteristic differences were found in the oral feeding test, there were no such differences in blood clearance of fat after an intravenous fat load.

F. E. HYTTEN

Fallout and Man's Diet. E. R. Mercer and F. B. Ellis. *Dairy Sc. Abstr., 23:* 1, 1961.

Strontium-90 in individual foods that make up the human diet in the United Kingdom was determined and here reported in terms of micromicrocuries intake per day. "Milk and cream" was highest, in 1958, 3.47; in 1959, 4.86. Calcium intake during these years from milk and cream was calculated to average 498 mg. per day, also the highest of any of the foods. The "discrimination" against strontium relative to calcium in the food chain is discussed by the authors. A useful table is presented giving data on twenty-six of the principal nuclides formed in fission, their half-life, types of radiation emitted, fission yields, etc. Reasons why strontium-90 is of particular biological significance are presented.

FRANK E. RICE

Studies on Hepatic Fibrosis. H. Popper, F. Paronetto, F. Schaffner and V. Perez. *Labor Invest.*, 10: 265, 1961.

Changes taking place in human and experimentally induced fibrosis of the liver were studied histochemically and at the ultrastructural level. The human material consisted of a variety of hepatitides and toxic necrosis, parasitic infections, hemochromatosis, tumorous conditions and cholangiolitides. Most of the experimental material was derived from rats treated with ethionine. Posthepatitic, postnecrotic or primary fibrosis was studied in (1) pericellular, (2) periductal and (3) periportal locations. Intraparenchymal fibrosis resulted from new formation of fibrils with typical collagen periodicity in tissue spaces about injured or

collapsed liver cells. Reduplication of the framework around liver cells was the consequence of collapse of plates and/or replacement from neighboring plates. Periductal fibrosis was usually associated with proliferation of fibroblasts. Electronmicroscopically no differences could be established between reticulum and collagen fibers, as visualized by light microscopy and the use of specific histochemical methods. Fibrogenesis is usually associated with deposition of polysaccharide positive matrix and connected with proliferation of fibroblasts. There was no evidence of formation of fibrils within the cytoplasm of cells.

M. SILBERBERG

Diethylpropion in the Treatment of "Refractory" Obesity. D. A. Seaton, J. L. P. Duncan, K. Rose and A. M. Scott. *Brit. M. J.*, 1: 1009, 1961.

A double blind trial of the anorectic agent diethylpropion (Tenuate®) was carried out on forty obese women outpatients who had proved refractory to dietetic advice alone.

After twelve weeks' trial the group on dummy tablets had gained an average of about 3 pounds of body weight; those on Tenuate had lost about 3 pounds. The difference was statistically highly significant. There were no important side effects but the weight loss was "disappointingly small" and much the same as would be expected from the use of amphetamines.

Like other anorectic agents Tenuate lost much of its effect after six to ten weeks of treatment, but apart from its cost "it seems to be a suitable drug for use as a short-term adjunct to the dietary treatment of obesity."

F. E. HYTTEN

Renal Thiamine Excretion in the Dog; Influence of Parenteral Administration of Glucose. H. N. Haugen. *Scandinav. J. Clin. & Lab. Invest.*, 13: 61, 1961.

A study of the renal excretion of thiamine in the dog indicated that thiamine is filtered through the glomeruli, reabsorbed in the tubules and also secreted by the tubular cells, both at low and at high plasma levels of thiamine. Intravenous administration of glucose and subsequent glycosuria did not influence the excretion of thiamine, either at low or at high thiamine excretory levels.

S. O. WAIFE

Ulcerative Colitis Provoked by Milk. S. C. Truelove. *Brit. M. J.*, 1: 154, 1961.

Ulcerative colitis remains a disease of theories, and treatment generally proceeds on a trial and error basis. During the last few years a group has emerged in whom removal of milk and milk products from the diet has led to a remission.

The present paper deals with five such cases in which milk was reintroduced, in one case twice, and in each instance provoked a frank attack of ulcerative colitis.

The case histories are given in detail and, from experience of relapse rates on and off treatment, it is concluded that the invariable relapse with reintroduction of milk points clearly to a causal relationship.

There was a highly significant positive correlation between the time a patient was symptom-free while off milk and the time taken to relapse after the reintroduction of milk to the diet. This finding is compatible with the possibility of these relapses being an immunologic type of response to milk proteins, with the reactivity of the colonic mucosa varying according to the length of time since it was last exposed to the allergen.

F. E. HYTTEN

Medium-Chain and Long-Chain Saturated Triglycerides and Linoleic Acid Requirements. H. Kaunitz, C. A. Slanetz, R. E. Johnson and V. K. Babayan. *J. Nutrition*, 71: 400, 1960.

Medium chain triglycerides (MCT) (C_{6-12}) and long chain triglycerides (LCT) (C_{12-18}) were prepared from coconut and palm kernel oils, free from unsaturated fatty acids. Diets containing MCT and LCT at 20 per cent levels, and fat-free (FF) diets, supplemented with 0, 0.1 or 2 per cent linoleic acid concentrate, were fed to linoleic acid-depleted weanling male rats. Body and organ weights were compared.

In the linoleic acid-deficient groups, body weights were depressed on the FF and the MCT diets similarly and significantly more on the LCT diets. But when 2 per cent linoleic acid was introduced, all groups had about the same weights. Similarly, with respect to organ weight changes, FF and MCT diets produced less deviations from normal than LCT diets. On a marginal linoleic acid intake, the requirements of rats fed LCT were about four times those of the rats fed MCT. It was concluded that MCT does not increase linoleic acid requirements over a fat-free diet and that LCT does.

FRANK E. RICE

Non-tropical Sprue. Fine structure of the Intestinal Epithelial Lesions. C. T. Ashworth, W. C. Chears, Jr., E. Sanders and M. B. Pearce. *Arch. Path.*, 71: 13, 1961.

Peroral biopsy specimens were obtained from the small intestine of two patients suffering from non-tropical sprue, and of two others diagnosed as having an "irritable colon" with diarrheal syndrome and a nonspecific ulcerative colitis, respectively. The latter patients served as controls.

Electronmicroscopic studies of the former disclosed the following characteristic changes of the jejunal mucosa: reduction in size and number of the microvilli and pinocytic vesicles, and sometimes absence of the terminal web of dense cytoplasm. These alterations are thought to be significant because of the possible importance of pinocytosis in the absorption of lipids and other materials in the malabsorption syndrome of sprue. Although one patient recovered, the state of the intestinal epithelia did not return to normal.

M. SILBERBERG

Excretion of Thiamine in Diabetes: Unrelated to Glycosuria and Polyuria. H. N. Haugen. *Scandinav. J. Clin. & Lab. Invest.*, 13: 57, 1961.

The urinary excretion of thiamine was studied in four persons with diabetes given a constant diet in an attempt to determine the relationship between the excretion of thiamine on one hand, and glycosuria and polyuria on the other. No correlation was found between the daily excretion of thiamine and the daily excretion of glucose, or the diuresis. It is concluded that a possible thiamine deficiency in diabetes is caused neither by glycosuria nor by polyuria. S. O. WAIFE

Phenylketonuria: City of Birmingham Screening Survey. M. M. M. Boyd, *Brit. M. J.*, 1: 771, 1961.

The organization of a screening survey for phenylketonuria, covering 98.8 per cent of infants born in 1959 and living in a county borough at six weeks of age is described.

The test used was a commercial paper stick treated with ferric chloride which was applied to a freshly wet diaper.

Only one case was found in about 19,000 children tested; in this child results of the test were positive at six weeks although they had been negative at two weeks in the maternity hospital. In addition to the one true positive test result there were three weakly positive test results which can apparently occur in children who develop quite normally. F. E. HYTTEN

Amino Acid Requirements of Children: Isoleucine and Leucine. I. Nakagawa, T. Takahashi and T. Suzuki. *J. Nutrition*, 73: 186, 1961.

The purpose of this study was to determine the minimal needs of school-age children for isoleucine and leucine. The protein in the experimental diets was supplied by mixtures of highly purified amino acids. Six eleven year old boys were used. Nitrogen balances were determined, also excretion of creatine and creatinine, and in some experiments basal metabolism and riboflavin excretion were measured. Creatine excretion increased markedly upon consuming the amino acid mixtures as compared with the pretest period when the subjects were on normal diets. For these subjects, daily requirements in terms of milligram per kilogram body weight were found to be 30 for isoleucine and 45 for leucine. FRANK E. RICE