ANOTATED BIBLIOGRAPHY

Diseases of the Small Intestine

This issue contains articles on small intestine which appeared in January to August issues of some journals. Contributed by Dr P S Kamath, St John's Medical College, Bangalore 560025, Dr V Santhi Swaroop, Tata Memorial Hospital, Mumbai 400012 and Dr S R Naka, KEM Hospital, Mumbai 400012.


6. TOSIM-DE REEPS VEA JE, BANNER BF, HAYLIN MF, SAKIN AE, RODMAN MJ. Effect of cimetidine on intestinal adaptation following massive resection of the small intestine. Surg Gynecol Obstet 1983; 156: 41-46. An experimental study confirming the usefulness of cimetidine which was previously given on an empirical basis.


12. KALSTROM L, CASSELMAN J, VOSAL M, LUNDGREEN O. The importance of the enteric nervous system for the bile-acid induced secretion in the small intestine of the rat. Scand J Gastroenterol 1983; 18: 117-22. Authors conclude that the sodium-bicarbonate-induced ileostomy secretion is partly caused by the activation of local nervous reflexes.

13. RASMUSSEN SN, NIELSEN OH, JURGENSEN T, JACOBSON IE, LANE J, MAUGM E. Comparison of an open and a closed tube for collection of jejunal juice. Scand J Gastroenterol 1983; 18: 353-7. Authors recommend a closed tube system for the investigation of pH-sensitive substances in jejunal juice while such device does not seem necessary for the study of bacterial microflora and pancreatic enzymes.


15. ANDERSEN EJ, SCHOFFNER H, SKAGEN DW, HAGA H. Enzyme activities in jejunal biopsy samples from patients with adult coeliac disease and without siroteria. Scand J Gastroenterol 1983; 18: 365-8. Suggests that lack of stenotermia in some patients with coeliac disease is due to better preservation of the ileal function rather than to a less severe jejunal mucosal injury.


19. OHRINEN C, NIBBEN WIJN, LEDSON C, WEBER DG. The specificity of wheat protein Reactivity in coeliac disease. Scand J Gastroenterol 1983; 18: 603-7. Only a pure wheat protein preparation such as alpha gliadin or alphaprotein is of value in studying immunological parameters in coeliac disease.

20. VEDAL KO. Intestinal bypass. A randomised, prospective clinical study of end-to-side and end-to-side jejunal bypass. Scand J Gastroenterol 1983; 18: 627-34. Results indicate that end-to-side shunt is a better operation than the end-to-end shunt.


Suggests that motilin regulates interdigestive motility in intact, instrumented canine duodenum but not in extrinsically denervated jejunum.


Authors conclude that bombesin and enkephalin can affect the transport of water and electrolytes in the canine jejunum.


This elegant study demonstrates that the main mechanism of increased sucrose activity on sucrose feeding is stimulation of enzyme synthesis in the liver. Enzyme activation is a relatively minor effect.


Incomplete absorption of fructose is a possible cause of gastrointestinal symptoms following fructose-containing commercial foods.


Sorbitol, a common sweetener in "sugar-free" commercial food products, was found to cause symptoms of carbohydrate intolerance in healthy volunteers.


A simple method for investigating ileal function is described.


A new method for measuring epithelial cell migration activity was developed to determine the rate of turnover in different sections of the intestine. Differences were observed between young and aged animals.


Trimethoprim-sulfamethoxazole and to some extent trimethoprim alone were effective in preventing traveler's diarrhea in this study of 145 US students traveling in Mexico.


Ethanol-induced alterations in jejunal mucosal morphology and water transport are accompanied by mucosal and/or submucosal hyperemia.


Calcium inhibits iron absorption in rats. Individuals consuming milk diet with high calcium and marginal amounts of iron could develop iron deficiency anemia. This is more true of cow's milk than of human milk.


Cutaneous flushing and accelerated gut secretion are induced in isolated rabbit ileum. Such secretion is known to depend on presence of calcium and was not accompanied by histological tissue damage or by activation of endonuclear or exonuclear cytochrome.


An important study from Calcutta which suggests evidence for a diarrhoea-induced fluid loss in patients with normal serum immunoglobulin.


Untreated coeliacs were found to have androgen deficiency, low testosterone, high estriol index, high oestradiol-17 beta levels and a high prolactin to testosterone ratio.


Untreated coeliacs had increased numbers of mucosal cells in jejunal biopsies. These returned to normal numbers on treatment with gluten-free diet.


Hydropsplenic in adult coeliacs can be improved by gluten-free diet.


A significant reduction in mouth to anus time but not in gastric emptying time was seen during psychological stress in 8 normal volunteers.


Colchicine causes significant changes in enterocyte ultrastructure and perturbs lipid metabolism, altering cholesterol and fatty acids and their secretion in the form of triglycerides.


Dicycline in single daily dose of 50 mg was found to reduce significantly the frequency of traveler's diarrhea in this placebo controlled trial and is thus recommended for short term prophylaxis.


Hyperkalemia in patients with jejunal bypass has been shown to occur because of absorption of colonic mainly increased dietary oxalate, but also of oxalate derived from tissues or from bacteria.


Pregnant rats have been shown to have a loss of sensitivity of myoelectric activity in the intestines during the period of pregnancy.

42. BIELE DD, HERMAN RH, BIELE S, HACER R, HAMER B, HALLOMAN A. Adaptive response of human to changes in dietary calcium: relationship between vitamin D regulated...

The authors conclude that: (a) intestinal adaptation to dietary calcium can be studied with duodenal biopsy specimens, (b) duodenal alkaline phosphatase activity changes under the influence of dietary calcium on 1, 25-dihydroxyvitamin levels and (c) hyperparathyroid patients do not adapt to dietary calcium because dietary calcium fails to lower 1,25-dihydroxyvitamin levels in these patients.


Crohn's disease tissue, when injected into athymic nude mice induces lymphoid hyperplasia and lymphomas that contain antigens recognized by Crohn's disease sera.


The study suggests a distinct role for a humoral agent responsible for the proliferative changes seen after small bowel resection, and in this respect enteroglucagon appears more relevant than gastrin.


Lactose load given along with calcium leads to decreased absorption of calcium in lactose deficient subjects. This may be relevant in understanding more about negative calcium balance seen in lactose deficient people.

46 Jacobs DR. Biochemical and ultrastructural characterization of the molecular topography of the rat intestinal microvillous membrane. Analysis of cytoplasmic distribution of carbohydrate groups and amino acid binding sites. Gastroenterology 1983; 85: 46-54.

An elegant study which sheds more light on mucous gel layer of the small intestine and the role of microvillous membrane hydrodynamics in contributing to it.


Intubation with a 4-lumen tube placed into terminal ileum has been shown to retard gastric emptying and shorten small intestinal transit rate. Techniques used were gamma camera estimation of $^{131}$I and breath hydrogen analysis.


In vitro experiments demonstrating that unsaturated fatty acids inhibit Na,K-ATPase and Mg-ATPase isolated from basolateral membranes of enterocytes and colonocytes. This point provides a possible explanation for the observed anomalies in water and electrolyte absorption by the colon in tropical sprue.


A study from Finland confirming known associations—relative risk for coeliac disease for HLA-B8, DR3, -18.6 and for DR7—15.0. Alopecia predisposes to coeliac disease partly independently of DR3 susceptibility genes.


Leucocyte migration inhibition by glutein has been shown to be not due to lymphokine production by sensitized lymphocytes but due to cytoplasmic antibody.


Using microaggregated albumin clearance as a splenic function, hypoplasia has been detected as an isolated phenomenon in patients with coeliac disease and ulcerative colitis.


Evidence that prevalence rates of coeliac disease are similar in children and adults and therefore the disease in these two age groups is a variety of the same disorder.


Urine has been shown to have no acute harmful effect on the intestinal mucosa used for reconstruction of pouch for diverting urinary stream.


The presence of alcohol in the intestinal digestive aids the tight junction of the intestinal epithelium and promotes the absorption of macromolecules.


The study refers to the complexities of the genetics of coeliac disease and some of the features it shares with HLA-DR pattern in juvenile insulin-dependent diabetes.


Bacterial adhesion may play an important role in the pathogenesis of protracted diarrhea.


Clostridum toxin has been shown to decrease 5-HT levels of enterochromaffin cells from the intestinal segments and this has been well correlated with fluid losses.