MEETINGS AND CONGRESSES

Society of University Surgeons

19th Annual Meeting

The Society of University Surgeons held its nineteenth annual meeting on February 12, 13, and 14, 1958, in Boston, Massachusetts, as the guest of Harvard Medical School. Five papers were presented which are of specific interest to gastroenterologists.


The rationale for the use of amino acid therapy is reviewed, with glutamic acid influencing the metabolic reactions of transamination and arginine affecting the synthesis of urea. Ninety patients with ammonia intoxication, in most cases secondary to liver disease, were treated with arginine or with a new compound, arginine glutamate. The latter was found to be only slightly more effective in reducing blood ammonia than was arginine. Clinical states of the patients correlated well with the effect of treatment on blood ammonia concentrations. An even closer correlation occurred with the ammonia level in cerebrospinal fluid.


Ammonia levels were determined on samples of blood before, during, and after the infusion of ammonium acetate solution into 15 anesthetized dogs. Before infusion, samples from the portal and hepatic veins showed an average drop in ammonia of 81 per cent. During infusion portal vein levels went to 20 µg. or more per ml., whereas hepatic vein levels remained low. Hemorrhagic shock did not influence the function of the liver in "clearing" ammonia except agonally. In the femoral vessels, arterial ammonia was higher during infusion, venous level higher after infusion. Carotid artery, jugular vein, and cerebrospinal fluid levels showed that ammonia passed readily in and out of the cerebrospinal fluid.

3. Serum Lactic Dehydrogenase in the Diagnosis of the Acute Surgical Abdomen, C. Calman, F. B. Hershey, J. O. Skaggs, and A. Spencer, Washington University, St. Louis, Mo.

The enzyme lactic dehydrogenase is present in relatively high concentrations in the intestine. With intestinal necrosis, the level of the LDH in the serum rises. In 6 of 8 cases of intestinal infarction serum LDH was more
Meetings & Congresses

than three times normal. In mechanical small-bowel obstruction without necrosis, ileus, generalized or localized peritonitis, or extensive surgical procedures, the rises in serum LDH have been of lesser magnitude.

4. A Valve Mechanism to Prevent Gastro-Esophageal Reflux and Esophagitis, R. H. Adler, C. N. Firme, and J. J. Lanigan, University of Buffalo, N. Y.

In 50 dogs, the esophagogastric junction was resected and a one-way valve created by obliquely tunneling the distal esophagus into the stomach. The tunnel was formed either by overfolding the fundus around the distal esophagus after recreating the cardiaoesophageal angle, or by placing a butterfly-shaped sling of knotted nylon net around the terminal esophagus, anchoring it to the anterior and posterior surfaces of the fundus. Valve competence was checked by fluoroscopic studies, esophagoscopy, apomorphine administration, and postmortem study. Reflux could not be demonstrated in animals prepared with tunnel valves.

5. Endocrine Influences of the Pancreas on Gastric Secretion: I. The Effects of Glucagon and Alloxan on Heidenhain Pouch Secretion, H. W. Mayo, Jr., and D. M. Enerson, State University of New York, Syracuse.

Intravenous glucagon caused a fall in the acid secretion in 6 of 9 Heidenhain pouch dogs. Diabetes was produced in 3 pouch dogs by intravenous alloxan. In each there was a marked increase in the acid output of the Heidenhain pouch, more marked in the fed than in the fasting state.

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Some Disorders of the Gastro-oesophageal Region

F. Avery Jones began by reviewing the mechanism preventing reflux from the stomach into the esophagus. He stressed the importance of the high pressure zone in the terminal 3 cm. or so of the esophagus demonstrated by E. N. Rowlands, C. F. Code, and others. This zone is due to increased tonus of the circular muscle fibers in this region and is not associated with muscular hypertrophy. It constitutes a barrier between the stomach and the esophagus which is independent of the diaphragm, and the occurrence of reflux in hiatus hernia is related to the tone of this sphincter. The post-