

gastritis, and 3 patients with pernicious anemia were chromatographed on DEAE-cellulose columns. IgG fractions obtained were dialyzed, lyophilized, tested for purity by immunoelectrophoresis, and for the P. C. A. activity by immunofluorescence technique on rat gastric mucosa. One hundred and twenty male Sprague Dowley rats with an initial weight of 220~250 g were divided by random allocation into three groups; saline solution, normal IgG (3 mg/0.2ml saline), and IgG contained P. C. A. (3 mg/0.2 ml saline) treated groups. These groups were sacrificed after 4, 6, and 8 week's duration of treatment on 8~11 rats each.

Hydrochloric acid output per unit body weight in P. C. A. treated group decreased as compared with other two groups after 6 week's duration of treatment, and intrinsic factor (GPIMH method and RIMH method) output in P. C. A. treated group also after 8 week's duration of treatment. The total counts of parietal cell (Cox and Barnes's method) in the stomach of P. C. A. treated group decreased as compared with other two groups after 8 week's duration of treatment, and serum B-12 level also decreased after 8 week's duration of treatment.

106. HYPERSECRETION OF GASTRIC ACID FOLLOWING MASSIVE RESECTION OF SMALL INTESTINE IN THE RAT

H. OHASHI and T. TAKETOMO

*2nd Department of Surgery Gifu University School of Medicine
(Director: Prof. Takao Takemoto)*

- 1) A total of 74 adult female rats (inbred Moriyama so-o) were served for a series of experiment, in which proximal 50%, proximal 75% distal 50%, distal 75% and more than 90% of the small intestine distal to the ligament of Treitz was resected, and after complete recovery, gastric secretion and gastrointestinal motility were examined by means of Shay's method as well as Nylander's technique.
- 2) It was proved with the method of Shay that postoperative gastric hyperacidity occurs on the rats, in which over 75% of small intestine was removed (referred to massive resection, here after), favoring the incidence of peptic ulcer after massive resection. This fact is consistent with the result from Heiden-hain pouched dogs which were reported by previous workers.
- 3) The Nylander's approach to the motility of gastrointestinal tract, using ⁵¹Cr as an indicator, depicted that the gastric emptying was significantly depressed and the duodenal motility was slightly retarded after massive resection.
- 4) The above finding could be accounted for on the basis that the massive resection induce an excess of functional load on the remaining intestinal segment, leading to an imbalance of gastrointestinal activity, which may result in an acceleration of acid secretion and a delay of emptying in the stomach.

107. GASTRIC BLOOD FLOW OF THE CORPUS AND THE ANTRUM MEASURED BY A THERMOELECTRICAL METHOD

M. ODAKA, H. SATO, H. HIRASAWA and Y. NOMURA

Second Surgical Department, Chiba University, School of Medicine, Chiba

In a previous report by authors at last meeting of this society, it was reported that a modified double thermocouple element did measure the stomach wall circulation of an anesthetized dog. The element was placed in submucosal layer of the corpus through a small upper midline incision. The purpose of this article is to observe and investigate difference of the gastric blood flow between the corpus and antrum stimulated with histamine, Leo-gastrin, pentagastrin or secretin.

METHOD: 16 healthy mongrel dogs weighing 6.5 to 20 kgs were anesthetized with chloralose and urethane intravenously. A thermocouple element was inserted into submucosal layer of corpus and the other element was inserted into the same layer of antrum through a small