

upon this same factor.

Methods. A series of 6 dogs was operated upon and after determining the pH of the gastric mucosa by inserting the electrodes of the Beckman pH meter through an opening at the site of the future anastomosis, an anterior gastro-enterostomy was performed. From one to 4 weeks later further pH determinations were made through a gastrotomy proximal to the gastro-enterostomy stoma. Immediately thereafter the portion of the jejunum involved in the anastomosis was converted into a pedicle graft by dividing and

inverting the bowel about 3 cm proximal and distal to the stoma and then restoring the continuity of the intestinal tract by end-to-end suture. Again, pH determinations were made at varying intervals after operation.

Results. In 5 out of 6 animals gastro-enterostomy alone failed to prevent a marked diminution of the average pH of the mucosa of 7 different regions of the stomach following the injection of histamine. (Table I.) After conversion of the gastro-enterostomy to a jejunal graft, however, the normal response to histamine was reversed in all 6.

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Comparative Effects of Pedicle Grafts from Different Levels of Intestinal Tract on pH of Gastric Mucosa.*

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The finding that pedicle grafts of jejunum implanted in the wall of the stomach have a profound effect on gastric secretion¹⁻³ leads obviously to an investigation of the effects of similar grafts from other portions of the intestinal tract. We wish to report herewith the results of such grafts on the pH of the gastric mucosa.

Methods. Medium sized mongrel dogs of both sexes were used in these experiments and the following routine employed. A laparotomy was performed and the pH of the gastric mucosa of 7 different regions of the stomach measured by inserting the electrodes of the Beckman pH meter through a gastrotomy.

Immediately thereafter a portion of the anterior gastric wall approximately 4 cm x 6 cm was excised and the defect closed by inserting a pedicle graft of intestine. The continuity of the bowel was restored by end-to-end anastomosis. In 4 animals the graft was taken from the duodenum, in 5 from the jejunum, in 3 from the ileum and in 3 from the transverse colon. The graft in each instance consisted of a segment of bowel about 6 cm in length, opened along the antemesenteric border, and with its blood supply intact.

Following this operation the pH of the mucosa was again measured through a gastrotomy at varying intervals.

Results. Transplants from the ileum and colon are without effect so far as influencing the pH of the gastric mucosa after histamine is concerned. On the other hand, with both the duodenal and jejunal grafts the pH of the mucosa rose after the administration of histamine. In the present series the jejunal grafts were somewhat more effective than the duodenal.

* This study was carried out under a grant from the John and Mary R. Markle Foundation.

¹ Stefko, Paul, Andrus, Wm. DeW., and Lord, J. W., Jr., *Science*, 1942, **96**, 208.

² Lord, J. W., Jr., Andrus, Wm. DeW., and Stefko, Paul, *Arch. Surg.*, in press.

³ Andrus, Wm. DeW., Lord, J. W., Jr., and Stefko, Paul, *Proc. Soc. Exp. Biol. and Med.*, 1943, **52**, 99.

1. EFFECT OF PEDICLE GRAFTS ON THE pH OF THE GASTRIC MUCOSA

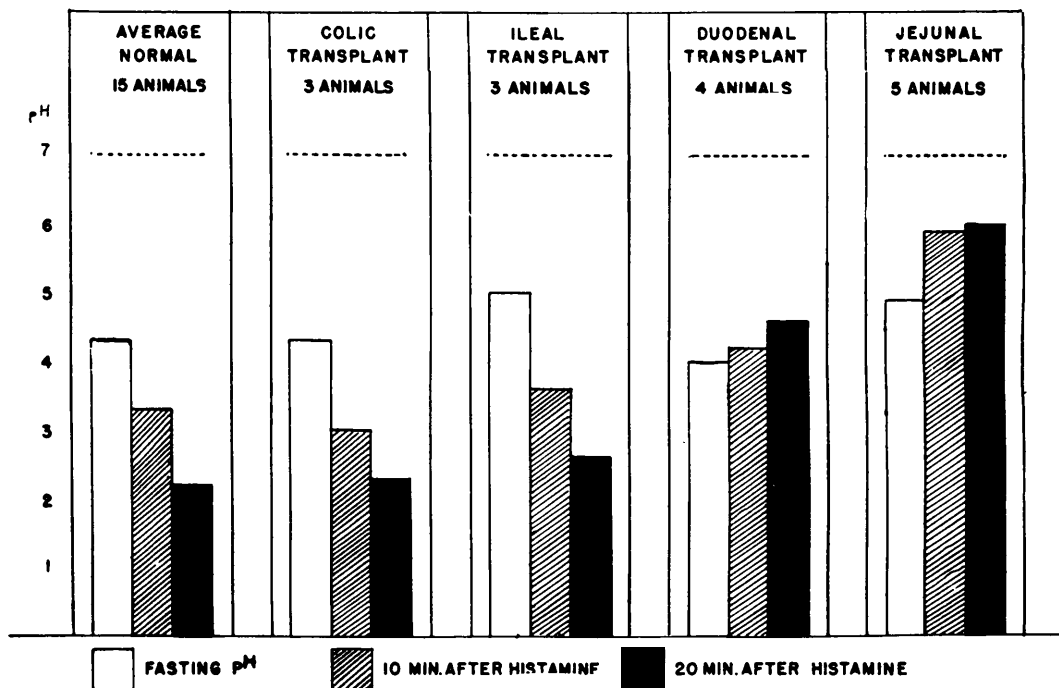


FIG. 1.

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Susceptibility of Hamsters to Peripheral Inoculation of Western, Eastern, and West Nile Encephalitis Viruses.

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Recent developments in the field of neurotropic virus diseases have changed a number of the prevalent ideas regarding the mode of transmission of these infections.¹ Arthropods have now been collected in the wild state infected with the viruses of Russian,² Japanese,³ Western,^{4,5} and St. Louis encephalitis.⁵ Furthermore, laboratory studies have shown that Ixodes ticks infected with the

Russian agent,^{2,3b} and *Culex tarsalis* mosquitoes infected with St. Louis encephalitis⁶ can transmit these diseases by biting. In addition, Japanese encephalitis may be transmitted by the bite of infected *Culex* mosquitoes⁷ but two

biol. epidemiol. i immunobiol., 1941, No. 2, 3.

⁴ Kitselman, C. H., and Grundmann, A. W., *Kan. State College of Agriculture, Experimental Station, Tech. Bull.*, 1940, No. 50, 5.

⁵ Hammon, W. McD., Reeves, W. C., Brookman, B., and Izumi, E. M., *J. Infect. Dis.*, 1942, **70**, 263.

⁶ Hammon, W. McD., and Reeves, W. C., *PROC. SOC. EXP. BIOL. AND MED.*, 1942, **51**, 142.

⁷ Mitamura, T., Yamada, S., Hazato, H., Mori, K., Hosoi, T., Kitaoka, M., Watanabe, S., Okubo, K., and Tenjin, S., *Trans. Soc. Path. Jap.*, 1937, **27**, 573.

¹ Smadel, J. E., *U. S. Naval Med. Bull.*, 1942, **40**, 1020.

² Shubladse, A. K., and Serdiukova, G. V., *Arch. Sci. Biol.*, 1939, **56**, 121.

³ a. Petrisheva, P. A., and Shubladse, A. K., *Arch. Sci. Biol.*, 1940, **59**, 72; b. Smorodintzev, A., Neustrojev, W., and Chagin, K., *Zhurnal. Mikro-*