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Effects of Mononitroparaffins and Related Compounds on Blood Pressure and Respiration of Rabbits.

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In the course of more elaborate study of the toxicity of mononitroparaffins and related compounds from the standpoint of industrial hygiene,[1] each substance was also examined for its effect on the blood pressure and respiration of rabbits. The first 6 members of the mononitroparaffin series, *i.e.*, nitromethane, nitroethane, 1- and 2-nitropropane, 1- and 2-nitrobutane, and 2-nitro-2-methyl-propanol, 2-nitro-2-methyl-,3-propanediol, tris-(hydroxymethyl) nitromethane, 2-amino-2-methyl-1-propanol, 2-amino-2-methyl-1,3-propanediol and tris-(hydroxymethyl)methylamine (the last three as hydrochlorides) failed to show any significant effect on either blood pressure or respiration. The same results were obtained in cats with the 6 nitroparaffins by W. Deichmann of this laboratory.

[1] Machle, W., Scott, E. W., and Treon, J., *J. Ind. Hyg. and Toxicol.*, 1940, **22**, 315.

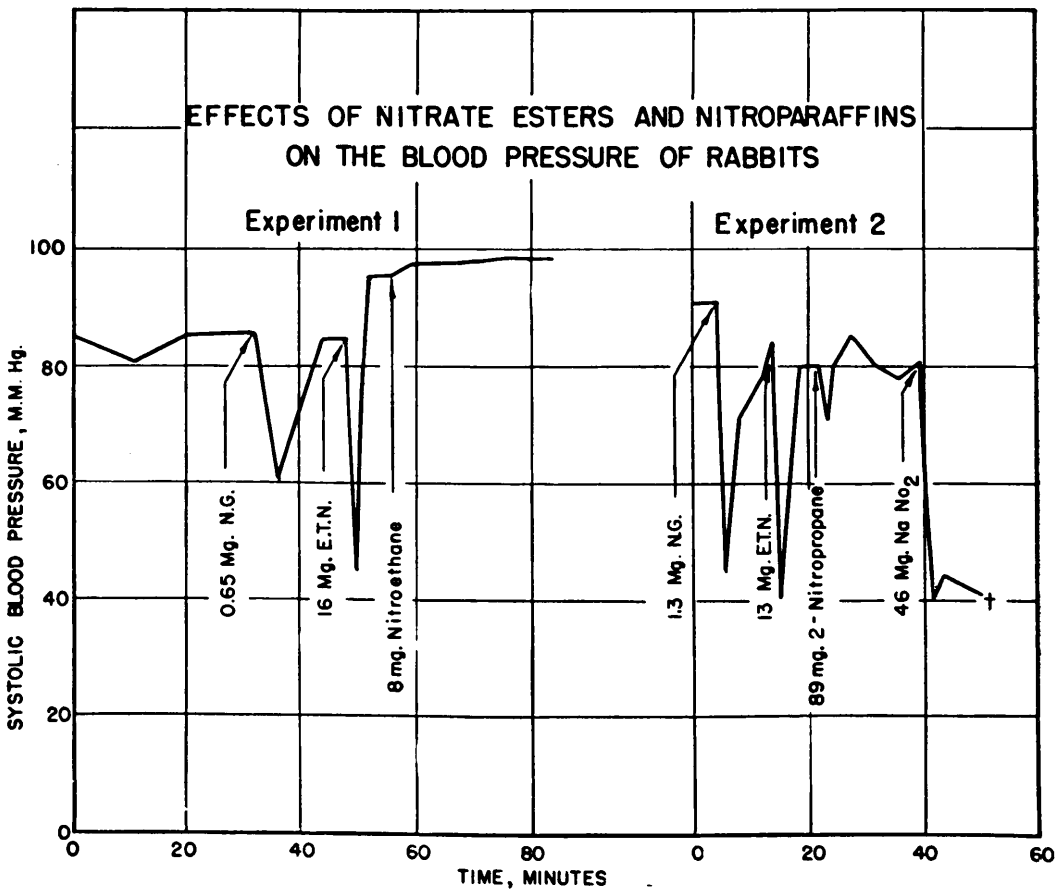

FIG. 1.

In addition, the effects of nitroethane and 2-nitropropane on the blood pressure of rabbits were compared with those induced by glycerol trinitrate, erythrityl tetranitrate and sodium nitrite. The results are shown in Fig. 1. The nitrates and sodium nitrite had very much more effect in much smaller doses than did the nitroparaffins.

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Occlusion of the External Pancreatic Secretion in Man.

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Recent experience has shown that survival for at least many months is possible in man following apparent occlusion of the external pancreatic secretion. This situation obtains after pancreatoduodenectomy is performed for carcinoma of the head of the pancreas or ampulla of Vater. While an anatomic "cure" of such lesions might now be envisaged, it is not known if man can survive *indefinitely* without external pancreatic secretion. Data bearing on this question can only be obtained from a study of operated patients to observe evidence of impaired physiologic activity which itself may not permit of indefinite survival. In this connection it may be pointed out that where only a portion of the head of the pancreas and a portion of the duodenum have been resected, the patients are not suitable subjects for such studies since there is considerable variation in the pancreatic duct system and accessory ducts, anastomosing with the main pancreatic ducts, may enter the first or the terminal segments of duodenum.

The data recorded below were obtained upon 3 male patients, all subjected to a one-stage resection of the head and neck of pancreas, lower 4 to 6 cm of stomach, entire duodenum, and first 2 to 4 cm of jejunum (Fig. 1). Continuity of the alimentary tract was re-established by choledochojejunostomy, and gastro-jejunostomy. Two patients, Fl. and H, had large carcinomas of the head of the pancreas. Patient W. had a large carcinoma of the ampulla of Vater extending upward in the common bile duct. Postoperatively, none exhibited pancreatic or biliary fistulæ.

Patients Fl. and H. survived operation for 5½ and 5 months respectively dying of carcinomatosis. The latter condition was the cause of general deterioration which became most pronounced during the last 2½ and 2 months respectively. Patient W. remains well, has gained 25 pounds in weight and is engaged in physical labor 11 months after operation.

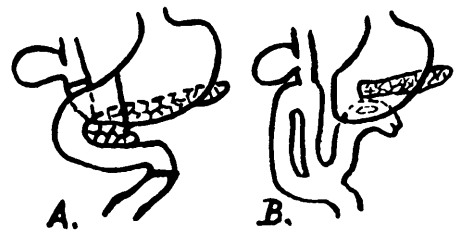

FIG. 1.

Diagram of one-stage pancreatoduodenectomy for excision of lower portion of stomach, entire duodenum and head of pancreas for carcinoma of the latter. A, showing levels of transection of dilated common bile duct, in lower portion of stomach, and in upper portion of jejunum. B, showing reconstitution of continuity of upper alimentary tract by gastrojejunostomy, choledochojejunostomy, and jejunostomy. The transected neck of pancreas is closed by mass ligature and sutures, thus resulting in occlusion of external pancreatic secretion.

Character of Stool. Patients Fl. and H. both had one or 2 daily large, bulky, soft, light tan or clay-colored foul stools following operation and during their survival period. Actual steatorrhea was present for a period in patient Fl., who had as many as 6 stools a day. Patient W. had steatorrhea prior to operation, but afterward, when bile alone was returned to the alimentary tract, the stools were normal.