characteristic symptoms of the dysmnesic syndrome. A clinical picture such as this provides further justification for the view that preludein should not be made freely available to the public, but should be restricted in its sale by placing it on the First and Fourth Schedules of the Poisons Rules.

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Pancreatico-gastric Fistula due to Giant Gastric Ulcer

Posterior penetration is a relatively common complication of gastric ulceration, being noted in 15-20% of patients treated surgically (Haubrich, Roth, and Bockus, 1953). In most cases the pancreas is the organ which is penetrated (Ruffin, 1951), but no reports have been found describing the transection of the main pancreatic duct by the ulcerative process. In the following case a giant gastric ulcer had destroyed a segment of the duct 2 cm. long, with the result that the pancreatic secretion was being discharged into the stomach.

CASE REPORT

A 72-year-old man was admitted to hospital complaining of increasingly severe epigastric pain for four years. He had lost some weight, and had had a small melaena. On examination there was marked tenderness in the left hypochondrium. A barium-meal examination revealed a very large gastric ulcer on the lesser curve, but there was no reflux of barium along the pancreatic duct.

At operation a benign ulcer, 3.5 cm. in diameter, was found midway along the lesser curvature of the stomach, penetrating posteriorly into the pancreas. The ulcer was "nipped" off the pancreas without undue difficulty, and a two-thirds gastric resection and Billroth I anastomosis were performed. At the end of the operation, when the pancreas was again drawn forward in order to dust the ulcer floor with penicillin powder, it was found that a segment of the main pancreatic duct 2 cm. long had been completely destroyed by the ulcer. The divided ends of the duct were clearly visible at each side of the ulcer crater, and from them pancreatic juice was flowing rapidly. It was possible to pass a small rubber tube (3 mm. diameter) into the left part of the duct, but not into the right part.

Most of the pancreatic secretion was pouring into the peritoneal cavity, and it was therefore decided to anastomose the ends of the divided duct to a defunctioned loop of bowel. An entero-anastomosis was made across the base of a proximal loop of jejunum, which was then brought up behind the transverse colon. The friable ends of the divided duct were unsuitable for direct anastomosis to the jejunum. An opening 1 cm. long was therefore made in the apex of the loop, and through this opening was threaded the end of the rubber tube previously passed into the left portion of the pancreatic duct (see Fig.). The top of the loop was then carefully stitched to the edges of the ulcer crater on the pancreas, and the remains of the gastro-colic omentum were tacked around it.

As soon as he recovered consciousness the patient was given 30 mg. of propantheline bromide ("pro-banthine"), and subsequently received 15 mg. three times a day, with an

additional 30-mg. dose each night for 10 days. Recovery was uneventful, and 16 days after operation the piece of fine rubber tubing was passed.

Nine months later the patient was free from symptoms and gaining weight. There was no evidence of pancreatic insufficiency or cyst formation.

COMMENT

The accessory pancreatic duct is sometimes injured by a penetrating duodenal ulcer, or during the performance of subtotal gastrectomy for this type of ulcer (Millbourn, 1949). The relative immunity to injury of the main pancreatic duct is surprising, since the duct is situated in the antero - superior part of the body of the pancreas close to the common site of gastric ulceration (Millbourn, 1949). The wall of the main duct may be more resistant to erosion and destruction by the ulcerative process than is the remainder of the gland tissue. Alternatively, some of the cases of external pancreatic fistulae which develop after gastrectomy may be due to failure to notice at operation that part of the main duct had been damaged or destroyed. Careful inspection of the crater may be necessary to detect the ends of the ducts; a final inspection just before closing the abdomen may reveal a considerable quantity of pancreatic juice in the vicinity of the pancreas.

If a divided duct is found it must be decided, by probing or injecting dye, whether it is the main or the accessory duct. The ends of the accessory duct can be ligated with unabsorbable thread (R. B. Cattell, 1957, personal communication), but if part of the main duct has been destroyed some type of pancreatico-intestinal anastomosis will be necessary; the details of the actual procedure employed will depend on the site and size of the fistula. Propantheline bromide is a powerful inhibitor of pancreatic secretion (Sinclair, 1956), and its administration in the immediate post-operative period may help to protect the anastomosis until the risk of leakage has passed.

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A drawing of the operative procedure employed.