Chronic Calcifying Pancreatitis Associated with Primary Hyperparathyroidism
—Report of a Case and Review of the Literature—

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ABSTRACT: A 34 year old male was hospitalized because of severe abdominal pain and diarrhea. An abdominal X-ray revealed multiple calculi in the head of pancreas and blood tests showed his serum calcium level to be high. He underwent surgery of the parathyroid gland and a parathyroid tumor was removed. Two months later, resection of the head of the pancreas was also performed. Eighteen months after his operation there has been no recurrence of abdominal pain or diarrhea and his serum calcium level is within the normal range. We report this case herein and also discuss the possible cause and effect relationship between primary hyperparathyroidism and pancreatitis, and the appropriate management, in relation to a review of the literature.

KEY WORDS: chronic pancreatitis, hyperparathyroidism, pancreatectomy

INTRODUCTION

Pancreatitis is occasionally associated with primary hyperparathyroidism (HPT) but a true cause and effect relationship between them has not been confirmed. Controversy also exists concerning the mode of therapy, as some authors claim that by treating the HPT, recurrence of pancreatitis can be prevented, while others deny this.

We report herein a case of a young male who presented a picture of chronic calcifying pancreatitis associated with HPT, and was successfully treated by resection of the head of the pancreas.

Case Report

A 34 year old male was hospitalized in January, 1987, with a 3 year history of recurrent severe abdominal pain and diarrhea four to five times a year. He was admitted following the finding of calculi in the pancreas head on an abdominal X-ray. In tests done after his admission, his serum calcium level was 11.1 mg/dl and 75 g O-GTT revealed a diabetic pattern and an insulin secretion of low reaction. An abdominal CT scan and ERCP showed multiple calculi in the pancreatic head and dilation of the pancreatic duct (Fig. 1).

Hyperparathyroidism was diagnosed and an operation performed in October 1987. A 2.0 × 1.5 cm tumor was removed from the left inferior part of the thyroid which was histologically found to be an adenoma of the parathyroid. Following this operation, his calcium level decreased to 8.0 mg/dl.

Two months later, an operation on the
pancreas was performed in order to treat the chronic pancreatitis. A schema of the operation performed routinely by us in cases of chronic pancreatitis is presented in Fig. 2. In addition to resection of the pancreatic head and separation of the pancreatic body and tail from the retroperitoneum, this method also includes excision of all the nerves around the splenic artery and vein. His postoperative course was uneventful and eighteen months after the operation there has been no recurrence of abdominal pain or diarrhea and his serum calcium level is within the normal range.

DISCUSSION

The first report of HPT associated with pancreatic lithiasis was published in 1947 by Martin and Canseco, and Mixter et al. reported the incidence of combined occurrence of the two lesions to be 7 per cent, while Reeves and Delbridge reported it to be 9.3 per cent and Sitges-Serra 8 per cent. Terisse, who summarized 83 cases of pancreatitis combined with primary HPT, found that about 70 per cent of the patients suffered from acute relapsing or chronic pancreatitis.

Sitges-Serra, who summarized 107 cases, found the type of pancreatic inflammation associated with HPT to be acute pancreatitis in 35.4 per cent, acute relapsing pancreatitis in 12.1 per cent, chronic pancreatitis in 37.4 per cent, and unknown in 15 per cent. Calcifications were found in about 20 per cent of the total patient population.

On the other hand, Bess, who collected 1153 cases of HPT from the Mayo Clinic, found only 17 (1.5 per cent) with associated pancreatic inflammatory disease, and claimed that the association of these two conditions was probably due to a biased patient selection or to chance alone. Moreover, he reported that cure of the hyperparathyroidism was usually not associated with amelioration of the symptoms related to pancreatitis.

Prinz and Aranha, who collected 1475 cases of pancreatitis, found only 5 (0.4 per cent) had an associated HPT but that the patients who had undergone parathyroidectomy had no further attacks of pancreatitis during follow-up periods ranging from one to four years. They concluded; 1) that HPT is rarely associated with pancreatitis, 2) that when such a combination does occur the pancreatitis is likely to be severe and, 3) that despite its rarity, a cause and effect relationship is still suggested by the fact that parathyroidectomy seems to prevent recurrence of pancreatitis.

Poloyan et al. in an early series of 150 HPT patients found that six had a docu-