Case Report

The Papilla of Vater Emptying into the Duodenal Bulb:
Report of Two Cases.

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We have identified two cases in which anomalous papilla of Vater was found emptying into the duodenal bulb. In both instances, bile outflow from the papilla was confirmed endoscopically and endoscopic retrograde cholangiopancreatography (ERCP) was performed.

Key Words: Papilla of Vater, ERCP, Duodenal bulb

Vater's papilla is usually located on the medial wall of the second portion of the duodenum\(^1\). However, its distance from the pyloric sphincter is variable. In most subjects this distance is greater than 5 cm\(^2\). It is reportedly less than 5 cm in only a small number of cases\(^3\). We have experienced 2 extremely rare cases in which the papilla of Vater was situated in the duodenal bulb.

CASE REPORTS

CASE 1: A 59 year old male presented with chronic epigastric pain. He had been diagnosed as having a duodenal ulcer 20 years before and had been on several antiulcer medications. His current pain occurred 2-3 hours post-prandially. Physical examination failed to reveal evidence of jaundice or anemia without hepatomegaly. Serum liver and pancreatic enzymes were normal. Endoscopy revealed a pyloric channel ulcer and a papillary elevation in the duodenal bulb from which bile outflow was seen (Fig. 1). An ulcer or an ulcer scar were not present in the duodenal bulb. The papilla was cannulated and ERCP was performed. A normal appearing pancreatic duct was visualized (Fig. 2). It was felt that this elevation was consistent with an aberrantly located papilla of Vater. Nearby, a smaller elevation was also seen which probably represented the minor papilla. The upper gastrointestinal series was not performed.

CASE 2: A 40 year old male was admitted to the Second Department of Internal Medicine, Oita Medical College for work-up of possible hepatocellular carcinoma. 5 months prior to this admission an elevated serum transaminase level was found. This subsequently normalized, however a progressive elevation in the α-fetoprotein occurred. Physical examination revealed palmar erythema, mild jaundice and mild hepatomegaly. Serum bilirubin was 1.4 mg/dl, SGOT 71 IU/1 (normal 11-36), SGPT 77 IU/1 (normal 2-34), alkaline phosphatase 221 (normal 82-240) and α-fetoprotein 1464 ng/ml (normal 0-20). Serum amylase was 195 IU/1 (normal 52-150) consisting of 26.4% pancreatic and 73.5% salivary isozymes. Elastase 1, lipase and PSTI were within normal limits. Work-up included abdominal CT, USG, angiography and laparoscopic liver biopsy. A diagnosis of chronic active hepatitis was made. There was no evidence of hepatocellular carcinoma. Upper gastrointestinal endoscopy was then performed.

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Fig. 1. Endoscopic photograph of case 1. There is a papillary elevation in the duodenal bulb from which bile outflow is seen (a). The duodenal 2nd portion is seen beyond the elevation (b).

Fig. 2. Endoscopic retrograde cholangiopancreatography of case 1. Normal appearing pancreatic and bile duct from the duodenal bulb is visualized.

A chronic ulcer scar was identified on the posterior wall of the lesser curvature of the stomach. In the duodenal bulb, an elevation was identified from which bile was seen flowing (Fig. 3). This was then cannulated which allowed visualization of a normal appearing pancreatic and biliary ductal system (Fig. 4). The upper gastrointestinal series was not performed.

DISCUSSION

The papilla of Vater is a papilla-like elevation of the duodenal mucosa at the site of termination of the common bile duct and pancreatic duct. It is generally located in the descending limb of the
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Fig. 3. Endoscopic photograph of case 2. There is a papillary elevation in the duodenal bulb and the 2nd portion is seen beyond this elevation (a). A normal orifice is seen in the elevation (b).

Fig. 4. Endoscopic retrograde cholangiopancreatography of case 2. A normal appearing pancreatic duct from the elevation in the duodenal bulb.

duodenum. Anomalous locations can occur, however. Lurje reported its presence in the third portion of the duodenum in 16 (8.25%) of 194 autopsy cases. Lindner et al. found that in 17.9% of 1000 patients subjected to intraoperative cholangiography, the papilla of Vater was located in the distal second portion, the angle, or the third portion of the duodenum. Thus, distal aberrancy of the papilla of Vater is not rare.

On the other hand, a more proximal opening of the papilla of Vater is uncommonly reported. In only 4 of 100 autopsy cases, Dowdy et al. found that the distance between the papilla of Vater and the pyloric sphincter was less than 5 cm. In 2 cases it was less than 3 cm, and the shortest distance was 1.5 cm. 

In the 2 patients reported herein, the opening of the papilla of Vater was located in the duodenal bulb.

A proximally situated papilla of Vater such as this can be clinically significant for two reasons. First, in such cases, the ampulla is at high risk for operative damage during gastrectomy. Second, significant duodeno-biliary reflux can occur due to loss of the oblique course of the common bile duct in the duodenal wall. This can lead to cholangitis or pancreatitis. Therefore, knowledge of a proximally located papilla of Vater is important in certain patients with upper gastrointestinal disturbances.

REFERENCES