VILOGLANDULAR ADENOMA OF THE DUODENUM

G. V. SHEAD AND MINNIE MATHAN

Christian Medical College Hospital, Vellore, South India

Two cases of villoglandular adenoma of the duodenum presenting with features of peptic ulcer are reported. At surgery both patients had intussusception of the duodenum. One of them had carcinoma in situ. The literature is briefly reviewed, and the importance of keeping in mind this rather rare condition, even in areas where duodenal ulcer is widely prevalent, is emphasized.

ADENOMA of the small intestine is a rare tumour. Most frequently it occurs in the duodenum (Morison, 1976). Only 44 cases of villoglandular adenoma have been reported in the duodenum. This paper reports two cases of solitary duodenal villoglandular adenoma, one of which showed changes of carcinoma in situ.

CLINICAL RECORDS

CASE 1.—A 26-year-old South Indian woman presented with a history of periodic episodes of burning sensation in the epigastrium for seven years. The symptom was maximal when the stomach was empty and was relieved by vomiting. She had no haematemesis, melena, or jaundice. Her vomiting had become persistent two weeks prior to her admission. On physical examination, gastric peristalsis was seen on one occasion, but no other abnormalities were detected. She was not anaemic and had a packed cell volume of 42%. Barium meal X-ray examination (Figure 1) showed that the second and third parts of the duodenum were dilated, with a polypoid mass in the second part. A funnel-shaped narrowing was present at the junction of the first and second parts. At laparotomy, a mass was palpable in the lumen of the jejunum 30 cm beyond the duodenojejunal flexure. This mass was the apex of an intussusception of the second part of the duodenum starting from the lateral wall just above the level of the ampulla, where a polypoid mass 5 cm in diameter was present. This mass and the adjacent wall of the duodenum were resected after placing a probe through the ampulla to project the bile duct.

The specimen consisted of part of the duodenal wall with a sessile hemispherical mucosal tumour measuring 8 cm x 6 cm x 4 cm (Figure 2). The surface of the tumour showed coarse nodules separated by deep crevices. The nodules varied in size from 2 to 10 mm. Histologically the major portion of the growth was composed of broad folds with branching tubules lying parallel to the muscularis mucosae (Figure 3A). Many of the tubules showed cystic dilatation. Tall columnar epithelial cells with basal nuclei showing some increase in mitosis lined the tubules (Figure 3B). Scattered goblet cells and occasional Paneth cells were also present. The surface of the tumour also showed some epithelial tubules lying perpendicular to the muscularis mucosae, with a thin core of lamina propria. The tubules were well separated by the abundant connective tissue of the lamina propria. Smooth-muscle bundles and lymphoid follicles with germinal centres were present in the lamina propria. These findings were consistent with a diagnosis of villoglandular adenoma.

AUST. N.Z. J. SURG., VOL. 48—NO. 2, APRIL, 1978
VILLOGLANDULAR DUODENAL ADENOMA

Figure 2: Case 1, adenoma showing surface nodules separated by deep previlolar folds.

CASE 2—During the eight years preceding her admission to hospital, a 30-year-old South Indian woman had experienced intermittent epigastric burning sensation radiating to the chest, neck, and back, lasting for two to three hours. It was not affected by meals. The patient experienced belching, but had no palpable in the upper jejunum. It was found to consist of the apex of an intraserosal tumour caused by a growth arising from the lateral wall of the second part of the duodenum opposite the ampulla. The polypl and adjacent duodenal wall were excised.

The tumour measured 4 cm x 4 cm x 2 cm, and its appearance was similar to that of Case 1, the surface nodules being somewhat smaller and measuring only 2.6 mm in diameter. Microscopic examination showed disorderly glandular proliferation and cellular atypia (Figure 4A). The tubules were lined by large hyperchromatic columnar cells with pseudostatification and marked increase in mitosis (Figure 4B). Goblet cells were scanty and showed mucous depletion. The lamina propria was scanty. The basement membrane was intact all around the tumour. The appearance was consistent with a villoglandular adenoma showing changes of carcinoma in situ.

DISCUSSION

Adenomas of the duodenum are considered to be rare tumours. Histologically they are divided into three types: (a) The first, the tubular or adenomatous polyp, is composed of branching tubules which grow parallel to the muscularis mucosae and are surrounded by lamina propria; (b) The villoous adenoma may be composed of bland finger-like processes of lamina propria, covered by epithelium, which project perpendicularly towards the lumen from the muscularis mucosae; or (c) The tubulovillous or villoglandular adenoma may show a pattern intermediate between those of the other two.

Figure 3: (A) an area near the surface of the same tumour showing branching epithelial tubules which lie parallel to the muscularis mucosae (H & E x 70); (B) higher magnification photomicrograph showing epithelium with uniform basally situated nuclei and scattered goblet cells (H & E x 110).

vomiting, haematemesis, melena, or jaundice. Physical examination did not reveal any abnormality. Her haemoglobin concentration was 7.3 g/dl. Barium meal examination showed non-filling of the third part of the duodenum, with distortion and fixation of the upper jejunal loops. At laparotomy, a mass was

194

types. Of these, villous and villoglandular adenomas are more common (Morsin, 1976). Schulten et alii (1976) reviewed the literature and found 42 cases of villous adenoma, to which they added one. Thirty of these were benign, three had carcinoma in situ, and 10 showed invasive carcinoma. Spiro and Wolff (1977) have described another case showing invasive carcinoma.

Both our patients complained of an epigastric burning sensation, which suggested peptic ulceration, and this has been the most common symptom reported. It has been suggested that episodes of obstruction due to the tumour are often the reason why these patients present, but intussusception has rarely been reported (River et alii, 1956). One of our two patients had clinical features suggestive of obstruction, but both had extensive intussusception at laparotomy. Another major presenting feature is bleeding, which was present in 48% of the cases collected by Schulten et alii (1976). Neither of our patients had overt bleeding, but one was anemic. The barium meal X-ray examination suggested the diagnosis in one case, but was not helpful in the other. Of the 42 cases reported by Schulten et alii, only six were younger than 40 years, while both the patients reported here were younger.

Of the reported cases of villoglandular tumours, only 26% were confined to the second part of the duodenum, while 58% of tumours in this location were malignant (Schulten et alii, 1976). One of the two in the present report showed carcinoma in situ.

Local resection sufficed to permit removal of both tumours without endangering the common bile duct. These cases emphasize the importance of keeping rare lesions such as neoplasms of the duodenum in mind, even in countries where duodenal ulceration is very common, to explain symptoms of acid peptic disease not significantly relieved by antacid therapy. They also emphasize that these tumours can be associated with marked intussusception and should be kept in mind when a mobile mass is palpated in the lumen of the jejunum at laparotomy.

ACKNOWLEDGEMENTS

We are grateful to Professor V. I. Mathan of the Gastroenterology Unit and the members of the Department of Diagnostic Radiology of the Christian Medical College Hospital, Vellore, for their assistance.

REFERENCES