นิพนธ์ต้นฉบับ

Carcinoma of the small intestine and periampullary region.

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Yenrudi S, Dharmmaponpilas J. Carcinoma of the small intestine and periampullary region. Chula Med J 1991 Apr; 35(4): 205-211

Fourteen cases of carcinoma of the small intestine and the periampullary area having surgical management were reviewed. The malignancy occurred frequently in the sixth and the seventh decades. The male to female ratio was 1 : 3.7. The most common clinical manifestations were jaundice and abdominal pain. The locations of the cancer were in the periampullary area, 8 cases, and in other portions of the duodenum in the remaining 6 cases. Two third of the patients with curative surgery exhibited the pathological staging of good prognosis.

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Received for publication. May 28, 1990.

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เสาวณีย์ เย็นฤดี, ชัชวาล ธรรมาภรณ์พิลาศ. มะเร็งเยื่อบุผิวของลำไส้เล็กและบริเวณแอมพูลา. จุฬาลงกรณ์เวชสาร 2534 เมษายน ; 35(4) : 205-211

ได้ทำการศึกษามะเร็งที่เกิดจากเยื่อบุผิวของลำไส้เล็กที่ได้รับการผ่าตัดตั้งแต่ปี พ.ศ. 2518 ถึง พ.ศ. 2527 รวบรวมได้ 14 ราย เนื่องจากมะเร็งของบริเวณแอมพูลา ส่วนหนึ่งเกิดจากเยื่อบุผิวของลำไส้เล็กบริเวณใกล้เคียง และส่วนหนึ่งเกิดจากมะเร็งของแอมพูลาเอง ไม่สามารถแยกจากกันได้ชัดเจน ในกรณีที่รอยโรคลุกลามแล้ว ดังนั้น จึงรวบรวมมะเร็งของบริเวณแอมพูลาในการศึกษานี้ด้วย ส่วนมะเร็งที่มีกำเนิดจากแอมพูลาอย่างชัดเจน 24 ราย ได้ตัดออกจากการศึกษา เฉพาะมะเร็งที่บริเวณแอมพูลามี 8 ราย มะเร็งทั้งหมดอัตราส่วนเพศชายต่อเพศหญิง 1:3.7 ช่วงอายุที่พบมากที่สุดอยู่ที่ 50-70 ปี ผู้ป่วยส่วนใหญ่มาด้วยอาการตัวเหลือง ตาเหลือง และปวดท้องในลำดับถัดมา จุลพยาธิของมะเร็งเหล่านี้ มักเป็นชนิดที่มีการพยากรณ์โรคดี เช่นเดียวกับพยาธิสภาพในขณะที่ทำการผ่าตัดเพื่อการรักษา ยังคงพบมะเร็งอยู่บริเวณที่เป็นแหล่งกำเนิด ส่วนน้อยของผู้ป่วยมีการแพร่กระจายของมะเร็งไปที่ต่อมน้ำเหลืองและตับอ่อน

Periampullary carcinoma excluding the head of pancreas is by far the most common when periampulla is considered to be the portion of the small bowel.[1] However the malignancy of this area may have arisen from the duodenum or the ampulla. In the majority of the advanced cases it is difficult to indicate the site of origin, hence the designation of periampullary malignancy. Primary cancer in this area is preponderanly carcinoma. The remaining portions of the small bowel show various types of malignant tumors. For example Leiomyosarcoma is in the jejunum whereas the lymphoma is in the ileum.[2] According to some authors, the carcinoid as a whole.[3] The malignant tumors in this area disclosed a greater incidence in the male than in the female.[2-5] The main clinical features were abdominal pain, obstruction and GI bleeding.[3,4,6] This study revealed clinical informations on the carcinoma of the small bowel and periampullary area. The histopathological typing of carcinoma and the extent of the lesions at the time of operation were also evaluated.

Material and methods

The surgical records of primary carcinoma of small intestine and periampullary region in Department of Pathology, Faculty of Medicine, Chulalongkorn University were reviewed between 1975 and 1984 retrospectively. Age, sex and pertinent clinical manifestations were included in the study. Histopathology, extent of the tumor at the time of surgery were evaluated comparatively. The pathological study based on H & E sections. Meyer's mucicarmine as well as special stainings for argentaffin granules were occasionally performed.

Results

Of the 14 cases of small intestine carcinoma analysed, within the 10 years period, there were 11 women and 3 men. The youngest was 35 year old while the oldest was 74. Eight patients were affected in the sixth and seventh decades. Six patients had jaundice; three developed abdominal pain; two cases each, had loss of body weight and abdominal mass. The duration of illness varied from one month to 8 years. The longest duration was associated with carcinoid tumor which was confined to the duodenum. Histopathologically, 7 cases were well differentiated adenocarcinoma, (figure 1A) and papillary adenocarcinoma was observed in 3 cases (figure 2). We found in one each of the remaining cases, a moderately differentiated (figure 1B, C), a poorly differentiated (figure 3), a mucin producing adenocarcinoma (figure 4), and a carcinoid tumor. Extensive surgical management (Whipple's operation) were performed in 8 patients; segmental resection of duodenum was done in one case.

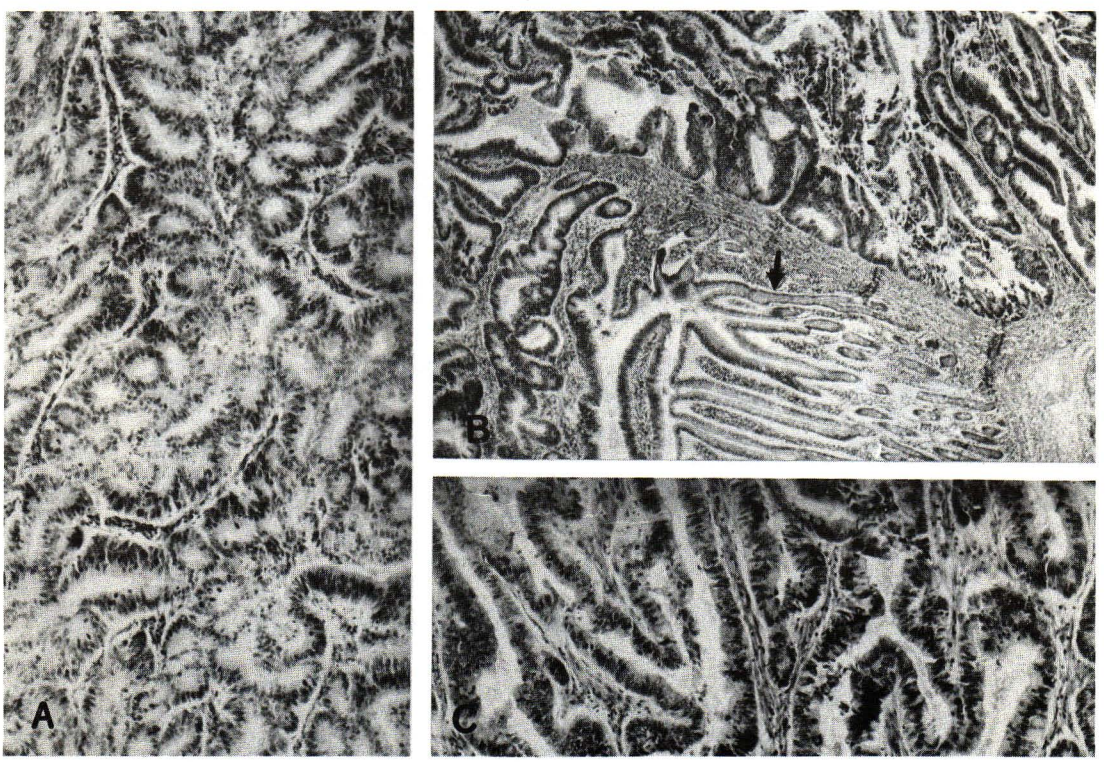

Figure 1. A. The illustration showing well differentiated adenocarcinoma, H & E × 200
B. The picture showing transformation of benign intestinal mucosa, arrow into adenocarcinoma, left and above. H & E × 200
C. Moderately differentiated adenocarcinoma. H & E × 200

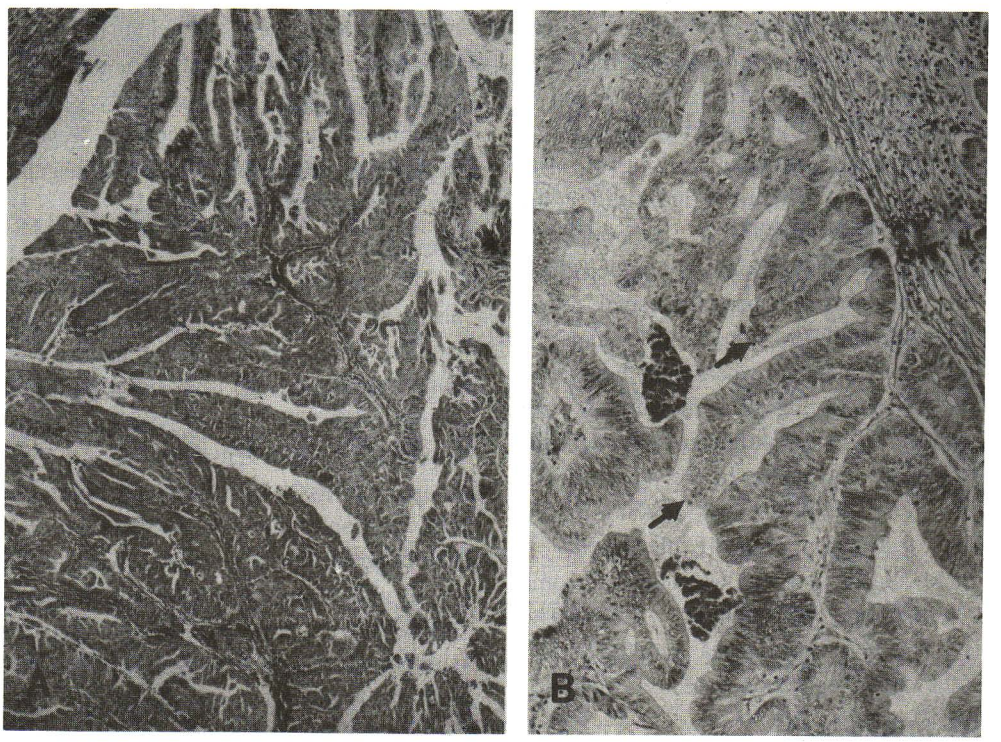

Figure 2. A. Papillary adenocarcinoma H & E × 100
B. High power of papillary adenocarcinoma, arrows. H & E × 200

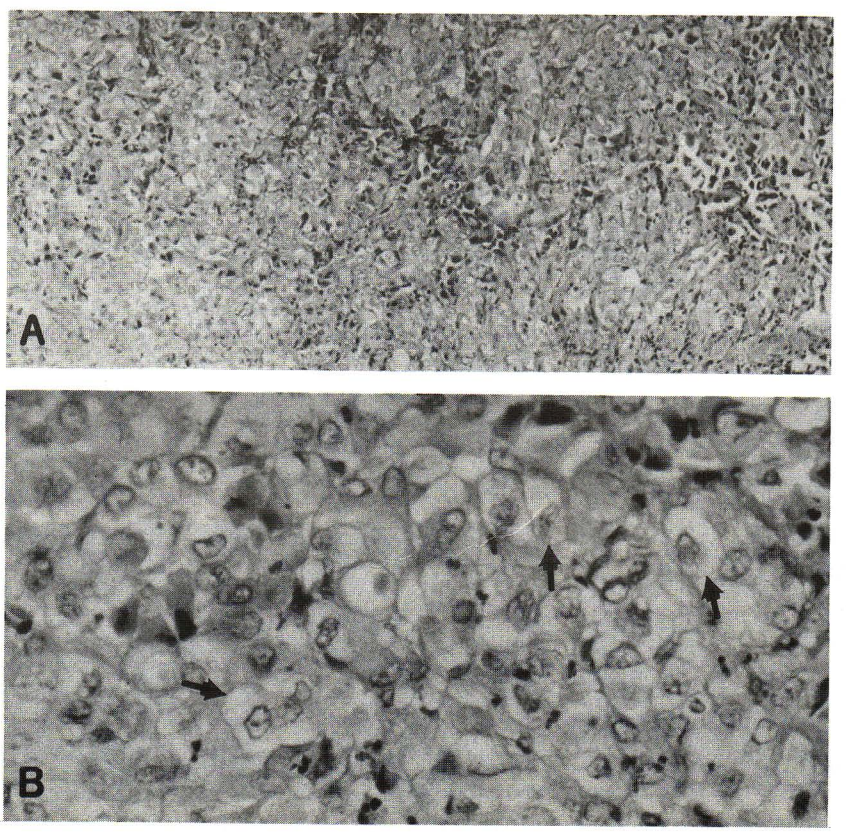

Figure 3. A. Poorly differentiated adenocarcinoma. H & E × 100
B. High power of poorly differentiated adenocarcinoma. Some tumor cells show vacuolated cytoplasm, arrows. H & E × 400

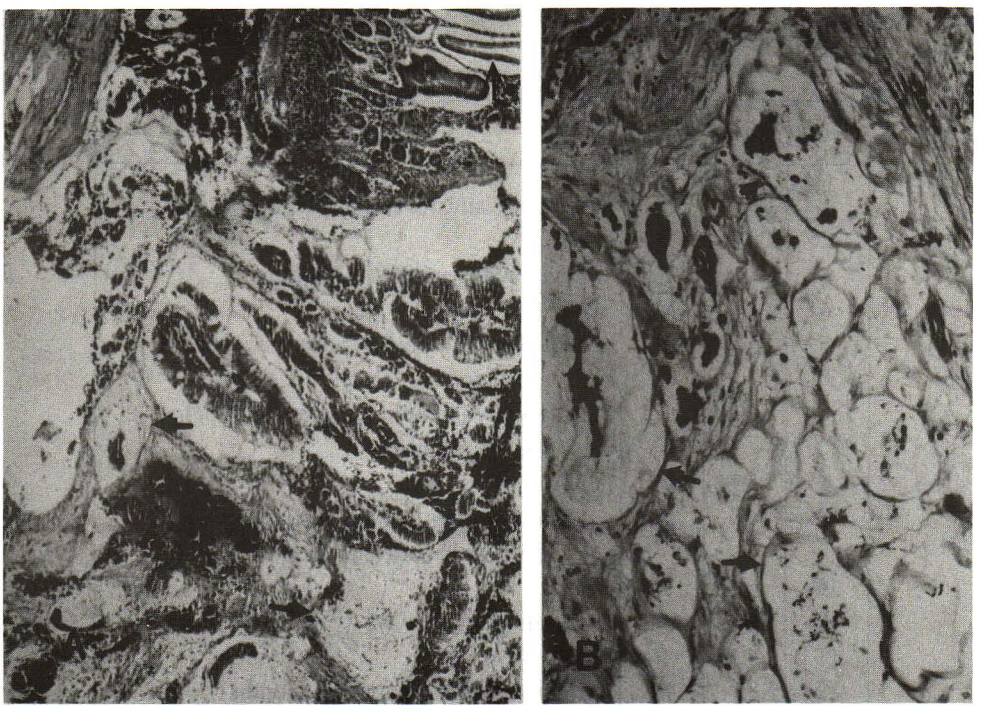

Figure 4. A. Mucin producing adenocarcinoma, thick arrows showing transformation from normal intestinal mucosa, thin arrow.s H & E × 100
B. High power showing mucin producing adenocarcinoma, arrow. H & E × 200

Four cases had biopsies from the duodenal lesion, and one from the periampullary area. In the cases with extensive operation, well differentiated adenocarcinoma localized to periampullary region was found in 3 cases. One each of papillary and mucin producing adenocarcinoma was also noted in this area. An instance of carcinoid tumor confined to the duodenum was observed as well as a case of well differentiated adenocarcinoma of duodenum. The remaining 2 examples with extensive operation showed infiltration into the pancreas and regional nodes and adjacent soft tissue.

Discussion

Carcinoma of the small intestine presented herein comprised 30.4 percent (14 cases) of the total malignancy of this area. Between 1975 and 1984, in Department of Pathology, Faculty of Medicine, Chulalongkorn University there were 46 surgical cases of the small intestinal malignancies. The most common was malignant lymphoma, 39.1% (18 cases).[7] In the past carcinoma was the most frequent malignant tumor,[8] however the present study as well as others indicate recently a new pattern that malignant lymphoma became predominant malignancy of the small intestinal.[7,9] Carcinoma having the tendency to develope in the upper part of the small bowel is well known.[3,4,10,11] The majority of the cases in the present study was similar. The important factor facilitated in the greater number in this area was that of advanced cases of ampullary carcinoma designated as periampullary lesion. In general the cacinoma of the small bowel had greater incidence in male than in female.[3,5] The result was in contrast to this series. The contributing factors may have been the smaller number of cases as well as having included some advanced cases of ampullary carcinoma. However the age distribution of this malignancy was in the same range, 50-70 years.[2,4,5] The principal clinical feature was jaundice instead of abdominal pain, obstruction and bleeding. The explanation was similar to the above. Majority of the cases with curative surgery exhibited localized lesion, 7 out of 9 patients. It was because of the anatomic location of the tumor which was prone to produce early clinical manifestation, so that the patient received early management. Histopathology of the malignancy played and important role contributing to good prognosis as well. Most of the cases had morphology of well differentiated or papillary adenocarcinoma while one case had carcinoid tumor. Localized lesion combined with histomorphology implied that the outcome in the majority of patients was good. The remaining 5 patients could not be evaluated. It was due to limitation of the material submitted. Prognosis of carcinoma in the

Table 1. Clinical features.

No.	Age	Sex	Clinical history
1	63	F	Jaundice and fever with chill one month
2	NA	M	NA
3	74	F	Fever with jaundice 8 months
4	42	M	NA
5	57	F	Midepigastric pain off and on 3 years with jaundice (stone in CBD)
6	69	F	Progressive abdominal pain with palpable mass 6 months
7	55	F	NA
8	64	F	Loss of weight 4 months, jaundice and fever with chill one month
9	62	F	NA
10	45	F	Jaundice off & on 2 years
11	50	F	NA
12	35	M	Right subcostal pain one months
13	NA	F	Jaundice with loss of body weight 1-2 months
14	56	F	Abdominal mass 8 years

Table 2. Location, Pathology and Extent of Lesion.

Location	No. of Cases	Operation	No of case	Pathology and/extent of lesion	No of cases
Periam pullary	8	Extensive	7	Well diff. Ad. CA	5
				Localized	3
				Infiltrate pancrease	1
				Metastasis to lymph node	1
				Papillary Ad. CA; localized	1
				Mucin producing Ad. CA., localized	1
		Biopsy	1	Papillary Ad. CA.	1
Duodenum	6	Extensive	1	Carcinoid tumor	1
		Segmental resection	1	Well diff.Ad. CA	1
		Biopsy	4	Well diff.Ad. CA	1
				Papillary Ad. CA.	1
				Mod. diff.Ad. CA.	1
				Poor. diff.Ad. CA.	1

Abbreviation Ad.CA. = adenocarcinoma, Diff = differentiated.
Mod. = moderately, Poor. = poorly

jejunum and ileum was poor. It also correlated with the degree of lymph node metastasis.[12] Up to now there is little knowlege about the etiology of the tumor of the small bowel.[11] Despite the great length of the alimentary tract and the huge surface area that are exposed to any carcinogenic agent compared to the other portions, tumors in this region are so rare. There was already documented explanation. According to several series carcinoid tumor was the most or second most common lesion in the small intestine.[9,13] This tumor was mainly in the appendix. It was usually small in size and slow growing, so that in the present study the incidence was rare. However inspite of the advanced lesion, surgery was believed to have benefit.[11] Recently there has been a study concerning immunohistochemistry, clinical and pathology of carcinoma in the small intestine. The tumor cells and non epithelial tumor cells exhibited little difference in mucin production. Striking numbers of tumors in this area disclosed common features of mucin and endocrine cells. The findings suggested multipotency of carcinoma.[14] In this study the prognosis was also correlated with the histologic types, carcinoembryonic antigen (CEA) grading, the feature of the tumor at the margin, vascular invasion and regional node metastasis.[14]

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