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CLINICAL ANALYSIS OF 150 PATIENTS WITH PERIAMPULLARY CARCINOMA

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This article report 150 cases of patients with periampullary carcinoma, of them, the tumors of 85 cases were in the head of pancreas, 26 in lower part of the common bile-duct, 21 in ampulla of Vater and 18 in duodenal papilla. Of 150 patients, pancreatoduodenectomy were performed in 53 cases but one had total pancreactomy, with a total resection rate of 36%. respectability was high in ampulla and duodenal papilla cancers, with a resection rate of 89.5% and 83.3%, respectively. The lowest resection rate, 14.1%, was in patients with cancer in head of the pancreas. Twenty cases had postoperative complications, the morbidity rate was 13.3%. Postoperative death occurred in 9 cases with a mortality rate of 6%. The follow-up results showed that the 3-year and 5-year survival rates of the resection group were 31.8% and 11.8% respectively. Fifty-four cases with resec-tions had a mean survival period of 16.7 months. Ampullary carcinoma group had the longest survival period, 22.4 months, but non-resection group, all had bile-intestinal shunt, only 4.8 months.

Key words: Periampullary carcinoma, Surgery, Survival period.

There were 150 cases with periampullary carcinoma proved by exploratory laparotomy and pathologic diagnosis in our hospital from January, 1980 to May, 1992. This is an analysis of the diagnosis, opera- tion method, curative effect evaluation and the relative complications.

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MATERIALS AND RESULTS

Sex and Age

There were 100 male patients and 50 female patients in the whole group. The ratio of male to female was 2 to 1. Their age ranged from 19 to 70, the average age was 51.9. There were only 5 cases under 40.

Sites of the Tumors and the Operation Status

As shown in Table 1.

Operative Methods

There were 53 cases performed with pancreato-duodenectomy by adopt Child's method. There was 1 case performed with total pancreatectomy. The total resection rate was 36%. The highest were those of the ampullary carcinoma and duodenal papilla carcinoma, 89.5% and 83.3% respectively; the lowest was that of the caput pancreatis carcinoma, only 14.1%.

There were 96 cases whose tumor could not be removed. Of which 80 cases were performed with gallbladder drainage. 16 patients who had stenotic duodenum were added gastroileostomy.

Postoperative Complications

There were 20 cases who had surgical complications after operation in this group. Some of them had over two kinds of complications, 2 patients suffered from incision dehiscence, 2 had incision infection, 4 had celiac dropsy and infection, 1 had digestive tract bleeding caused by stress ulcer, 1 had biliary fidtula, 1 had intestine necrosis, 1 had adherent intestinal obstruction, 6 had hepatic failure and renal fasilure, 1 had diabetes mellitus after pancreatectomy, 1 had postoperative brain metastasis soon.

Postoperative Short-term Death

There were 9 patients died after operation in one month and the death rate was 6%. 4 died in the resection group; 5 died in the unresectable group. See Table 2 for the reasons of death.

Table 1. The distribution of the tumors and resection rate of 150 cases

Site	Cases	Resection cases	Resection rate (%)
Caput pancreatis	85	12	14.1
Choledochus	26	10	38.5
Ampulla	21	17	89.5
Duodenum	18	15	83.3
Total	150	54	36

Table 2. Postoperative death reasons of 9 cases

Death reasons	Resection group	Unresectable group	Total
Hepatic and renal failure	2	4	6
Biliary fistula	1	0	1
Brain metastasis	1	0	1
Exhaustion	0	1	1
Total	4	5	9

Follow-up Results

All patients had been followed-up. The 3 years and 5 years survival rate were 51.8% and 11.8% respectively.

The average survival time of all 54 patients in the resection group was 16.7 months. Of them those with ampulary carcinoma had the longest survival period, 22.4 months. The average survival time of those in unresectable group was 4.8 months.

DISCUSSION

Early Diagnosis

Of 150 cases in the group, there were 52 patients had been diagnosed as icterus hepatitis, cholelithiasis, gastritis etc. before surgical operation. Till treated with little effect or after further examination, they were diagnosed properly as ampullary cancer.

Icterus is the most prominent symptom of the patients with ampullary cancer, but not the early

sympom. In the earlier period, most of them had nonspecific symptom at digestive tract, for example, discomfort in epigastrium, satiety, anorexia and abdominalgia. Along with the deterioration of the disease, they would have icterus, vomit, loss of weight, phyma in abdomen etc.. Generally patients with ampullary or lower choledochus carcinoma had icterus earlier, so it could be easily diagnosed at an early stage and would have better treatment effect; however those with caput pancreatis carcinoma had icterus late, so those treatment effect would be the worst. Hence, if patients over 40 had discomfort in epigastrium, satiety, abdominalgia, anorexia with unknown reason and could not be made a definite diagnosis by general routine examination, the doctor should consider that they might have periampullary carcinoma.

Ultrasound scanning and CT are in the first place of examination methods for the patients with preampullary carcinoma. It can show the affection of proicterus phase, and have a high rate in displaying cholangiectasis and enlargement of gallbladder. The positive rate of ultrasound scanning examination was about 76–94%,[1] and 80% in this group. The positive rate of CT was 76.5%. But these two kinds of examination can not display little tumor clarified.

If necessary, the doctor could use image examination, such as ERCP, PCT and selective angiography.

At present, tumor serum label examination is given much more research relatively and improve fast. There are CA-19, IAP, PCAA, PaA, Span-I antigen, PoA, CEA and CA-50 etc. developed in China. In this group, CEA positive rate is 60%, and CA-50 positive ratio is 75%. These two kinds of examination can be used as follow-up monitoring standard of postopera-tive pancreatic cancer.

Operative Method

The common operative methods of preampullary carcinoma are pancreatoduodenectomy, total pancreatectomy, ampullary carcinoma local resection and other extend resection. Because it can not be noticed at the early time, the resectional ratio was lower. The resectional rate of a group reported by Piorkowski[2] was 27.5%; it is 36% in this group.

Fifty-five cases with preampullary carcinoma performed with pancreatoduodenectomy was reported by Sun Jiabang et al.,[3] and its 5 years survival rate was 25%; the 5 years survival rate reported by Shen Zhongyi et al.[4] was 11.1%; and Zhao Weisheng[5] was 21.1%, this group was 11.8%. The operative mortality was still very high up to now because of the complicated operative technique, physiological harass to organism, tissue destruction, heavy wound strike and too many postoperative complications. The operative mortality was 4–14%[2] in abroad, 6.1–18.5%[3, 4] in China, 7.5% in this group.

Total pancteatectomy may cause the diabetic complication and its operative mortality was high. According to medical literature, there are over 20% diabetes beyond control,[6] and the operative mortality was 5% higher than pancreatoduodenectomy.[7] One case performed total pancreatectomy in this group. The patient had postoperative diabetic complication and died in liver metastatic carcinoma after 5 months existence.

Broad resection of pancreatic cancer and local pancreatic resection were recommended by Fortner.[8] There are very few cases reported in China. Whether or not it can improve the survival rate is still unknown, and its operational mortality is high, so these methods have not been adopted widely.

Prevent Complications

It was all reported that the principal complication of pancreatoduodenectomy was pancreatic fistula, and it was also the main cause of the operative death. Nakase[9] reported that pancreatic fistula rate was 28%, and Hoffmann[10] reported that pancreatic fistula mortality was above 60%. In recent years, the pancreatic fistula have been declined somewhat because of the improvement of operative technique. It was 5.6% reported by Lu Xinsheng,[11] and there is no pancreatic fistula in this group. We think that the occurrence of pancreatic fistula can be cut down by the application of Child's reconstruction operation and paying great attention to the interlink anastomosis of residual root and jejunum: (1) Pancreaticojejunostomy must make two slices zero tension suture, pancreatic end must be free about 2 cm, so that it can be sheathed with jejunum. If the jejunum is too narrow, the doctor could resection a

wedge from the margo inferior of the pancreatic residual root. Pancreatic section must be tightly sutured to prevent pancreatic juice from leakage and erosion to anastomotic orifice. Sheathed pancreatic residual root with jejunum smoothly to ensure good blood circulation of the jejunum section; (2) Pancreaticojejunostomy requires two layers tight suture, prevent mucous membrane from extrophia; do not suture too deep; do not make suture too deep; do not make the suture too tight and prevent it from cutting the pancreatic tissue; (3) Put a same- caliber multiple side- hole silica gel tube into ductus pancreatic. Insert about 3–5 cm and properly fixed. Free the other end in the cavum of jejunum for about 5–10 cm long. Let it fall off and two kinds of effects, support and drainage; and (4) Drain abdominal cavity sufficiently, especially close to the anastomotic orifice of pancreaticojejunostomy.

One case had biliary fistula in this group, that was performed pancreatoduodenectomy in our hospital in the early years. It was evident that this was caused by poor amastomotic techniques.

Among the cases of pancreatectomy, there was one case with mesenteric vena damaged. Though given suture and repair at that time, the vena was made slightly narrow, about 1/3. It was estimated that this did not affect the blood regurgitation The patient had evident symptom of peritonitis 3 days after operation. It was found by exploratory laparotomy that there was thrombosis in the mesenteric vena, and there was still subtotal small intestine had ischemic necrosis after thrombectomy, so the enterectomy had been performed. The occurrence of this kind of complication was mainly because the doctor's technique was not adept and meticulous. After the damage of the mesenteric vena, if there was no local defect it could be repaired by suture, or it should be repaired by vasotransplantation.

The main death reason of this group was hepatic failure and renal failure. It was proved by experimental and clinical research that patients with obstructive jaundice had multiple complications and high mortality. There were 9 cases of operative death. Among them 6 died from hepatic failure and renal failure, and all of them had damaged liver function before operation, and their serum bilirubin rose apparently. The intestinal tract of the obstructive jaundice patients lack bile (bile salt mainly), so the bacteria in the intestinal tract grow excessively. The source and absorption of endotoxin increased, together with the decrease of the liver detoxication potency, the endotoxin could get into the systemic circulation and cause acute renal failure. And when renal failure happened, it was difficult to treat, so prevention is the key to the matter. It still needs further research if the measure of preoperative reduction of icterus is active.

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