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Survival Analysis according to the Treatment Modalities of the Periapillary Carcinoma

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Background/Aims: The periapillary carcinoma includes the tumor originated from pancreatic head distal bile duct, ampulla of Vater and duodenum. The survival and prognostic factors of these tumors after treatment were investigated according to the treatment modalities. **Methods:** One hundred and sixty patients diagnosed as periapillary carcinoma from March, 1989 through November, 1996 were investigated to determine the clinical and pathological characteristics of periapillary carcinoma on the basis of medical records obtained by a retrograde method. The patients were divided into three groups such as pancreaticoduodenectomy group, bypass surgery group and percutaneous external drainage group. Their survival rates were analyzed according to the three different modalities of treatment and prognostic factors. **Results:** The median survival was 24.6 months after pancreaticoduodenectomy, 9.6 months after bypass surgery, and 3.8 months after percutaneous external drainage. In univariate analysis of the survival according to the prognostic factors after radical pancreaticoduodenectomy, origin of the tumor, pathologic differentiation and sex appeared as significant prognostic factors. **Conclusions:** Radical pancreaticoduodenectomy for patients with periapillary carcinoma is crucial for better survival. If the patient is fit to endure the operation and the extent of tumor invasion is limited, pancreaticoduodenectomy is the best choice of treatment. (**Kor J Gastroenterol 1999;34: 674 - 681**)

Key Words: Survival, Periapillary carcinoma

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(percutaneous transhepatic biliary drainage, PTBD)

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30-40% 1,3 5-10% 1,3,5 Kaplan-Meier log-rank

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가 88 (55%), 가 72 (45%)

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65.9 (Table 1).

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(endoscopic retrograde cholangiopancreatography, ERCP),

(percutaneous transhepatic cholangiography, PTC)

(magnetic resonance cholangiopancreatography, MRCP)

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36 (33.3%),

29 (26.9%), 30 (27.8%),

3 (2.8%) 가

108 1993 11

Table 1. Age and Sex Distribution

	Sex		Age (mean ± SD)* (Years)
	Male	Female	
Pancreaticoduodenectomy group	42	33	75 (49.7%)
Bypass surgery group	17	16	33 (21.9%)
Percutaneous drainage group	24	19	43 (28.5%)
Total	83 (55%)	68 (45%)	60.0 ± 12.9

* p=0.0001, one way ANOVA result, comparison of the mean age among three groups.

Table 2. Resection Rate of Periapillary Carcinoma according to Primary Site of Tumor

Preoperative diagnosis	Total (%)	PD* (%)	Resection rate (%)
Ampulla of Vater	30 (27.8)	28 (37.3)	93.3
Distal CBD †	36 (33.3)	24 (32.0)	66.7
Pancreatic head	29 (26.9)	17 (22.7)	58.6
Duodenum	3 (2.8)	2 (2.7)	66.7
Undetermined	10 (9.3)	4 (5.3)	40.0
Total	108 (100)	75 (100)	69.4

* PD, pancreaticoduodenectomy.

† CBD, common bile duct.

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93.3%, 66.7%, 66.7% 58.6%
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Table 3. Complications of Pancreaticoduodenectomy in 75 Patients

Complication	No. of cases (mortality*)
Wound infection	5
Intraabdominal abscess	4 (1)
Anastomotic leakage	5
Hepaticojejunostomy	3 (1)
Pancreaticojejunostomy	2 (1)
Postoperative intraabdominal bleeding	3 (1)
Marginal ulcer	1
Delayed gastric emptying	1
Respiratory failure	1 (1)

* Mortality: 6.7% (5 patients).

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24.6, 9.6, 3.8, 2, 5, 29.4%, 24.6, 5, 64.5%, 12.9%, 9.5%, 40.8%, 24.7%, 11.8%, 5, 가 (p<0.05, Table 4, Fig. 1). 가, 2) 가 Kaplan-Meier log-rank (Table 5).

Table 4. Survival according to the Treatment Modalities

	Median survival (months)	2 yr. survival (%)	5 yr. survival (%)
Pancreaticoduodenectomy group (n=75)	24.6	64.5	29.4
Bypass group (n=33)	9.6	12.9	-
PTBD* group (n=43)	3.8	9.5	-

* PTBD, percutaneous transhepatic biliary drainage.

Table 5. Prognostic Factors of 75 Patients who underwent Pancreaticoduodenectomy

	Median (mo)	5 yr survival	p-value*
Origin of the tumor			0.000
Amp of Vater (n=28)	29.9	40.8%	
Distal CBD (n=24)	19.2	11.8%	
Pancreatic head (n=17)	28.3	24.7%	
Undetermined (n=4)	4.0	0.0%	
Differentiation			0.01
Well (n=15)	46.8	36.4%	
Moderate (n=33)	26.2	30.7%	
Poor (n=5)	4.1	0.0%	
Sex			0.03
Female (n=31)	43.4	38.3%	
Male (n=42)	18.6	22.6%	
Metastasis to lymph node			0.16
Negative (n=35)	39.3	34.1%	
Positive (n=19)	22.6	23.1%	
Invasion to the adjacent organs			0.9
Negative (n=11)	31.5	37.0%	
Positive (n=34)	24.6	23.8%	

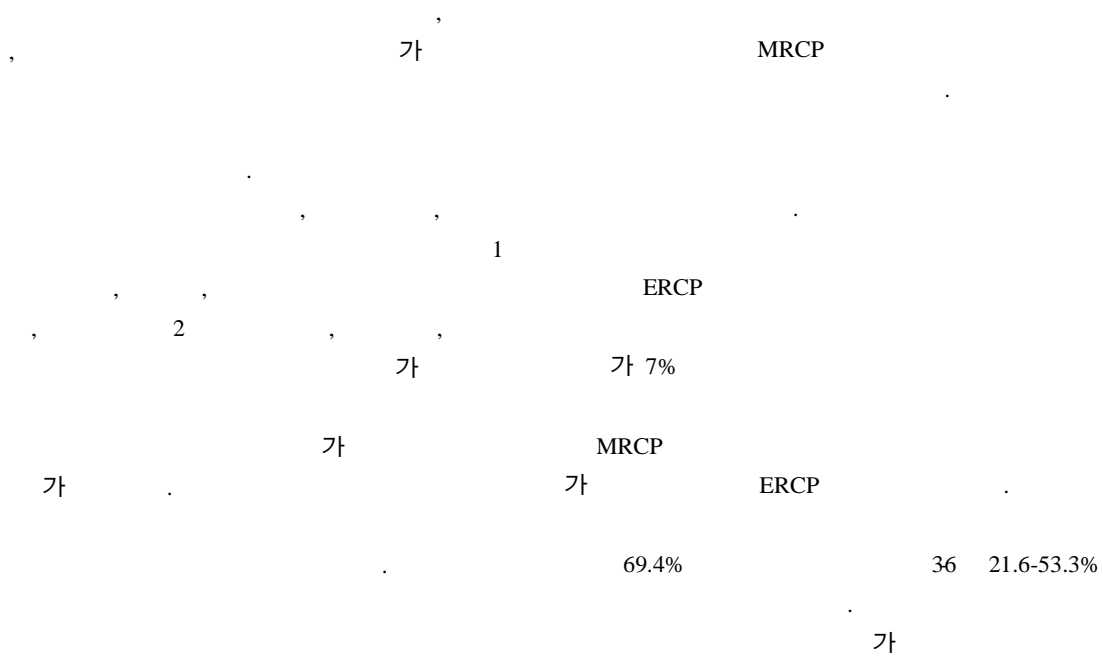
* log-rank test.

†
†

Fig. 1. Survival according to the treatment modalities.

* pancreaticoduodenectomy.

† percutaneous transhepatic biliary drainage.



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70-90%

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5.3%

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 , 66 24.6 , 9.6
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 12.9% 9.5% 5 가
 29.4% .
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