

## Evaluation of Resection of the Papilla of Vater for the Treatment of Cancer in the Papilla of Vater

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**Summary:** We evaluated the resection of the papilla of Vater performed in patients with cancer in the papilla of Vater. The subjects were 6 patients who underwent resection of the papilla of Vater between January 1969 and December 2001. The patients aged 57-87 years consisted of 3 males and 3 females. The maximal diameter of the tumors was 0.5 cm in 1 patient, 1.5 cm in 3 patients, and 2.0 cm in 2 patients. Macroscopically, the tumors were of the protruded type (exposed) in 3 patients, of the mixed type (predominant protruded type) in 2 patients, and of the ulcerative type in 1 patient. The histological depth of the tumors was up to the mucosa in 1 patient, up to the oddi in 1 patient, up to the panc<sub>0</sub>, du<sub>1</sub> in 1 patient, up to the panc<sub>1</sub>, du<sub>2</sub> in 1 patient, and unknown in 2 patients. Histologically, the tumors were papillotubular adenocarcinoma (pap-tub) in 4 patients and tubular adenocarcinoma of the well-differentiated type (tub<sub>1</sub>) in 2 patients. Resection of the papilla of Vater was chosen because of high risk factors such as advanced age in 2 patients, complicated severe cirrhosis and confinement to bed due to poor systemic conditions after intracerebral hemorrhage in 3 patients, and hepatic metastasis observed during surgery in 1 patient. Residual cancer cells around the excised region were positive in 4 patients and unknown in the remaining 2 patients. Of the 6 patients, 5 died within 2 years after surgery, but 1 is alive without symptoms of recurrence 7 years after surgery. The death causes were the primary disease in 3 of the 5 patients. From the viewpoint of radical treatment, resection of the papilla of Vater cannot be chosen as a reduced surgery for cancer in the papilla of Vater. However, resection of the papilla of Vater can be applied to very elderly patients and patients under poor systemic conditions, for whom pancreatoduodenectomy (PD) is considered excessively invasive due to a small diameter of tumor.

**Key words** resection of the papilla of Vater, cancer in the papilla of Vater, surgical treatment, quality of life

### INTRODUCTION

There is no objection to PD as the standard radical treatment of cancer in the papilla of Vater. With the recent tendency toward preservation of functions and reduced surgery, pylorus-preserving pancreatoduodenectomy (PpPD) has become common for the surgical treatment of tumors in the pancreatic head region, taking the quality of life (QOL) after surgery

into consideration, and excision of the pancreatic head has also been performed. In this study, we evaluated the resection of the papilla of Vater performed as a reduced surgery in patients with cancer in the papilla of Vater.

### SUBJECTS AND METHODS

We performed resection of cancer in the papilla

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Abbreviations: pap-tub, papillotubular; PD, pancreatoduodenectomy; PpPD, pylorus-preserving pancreatoduodenectomy; QOL, quality of life.

of Vater in 121 patients between January 1969 and December 2001 in Kurume University Hospital. The surgical methods were PD in 115 patients and resection of the papilla of Vater in 6 patients. In the 6 patients who underwent resection of the papilla of Vater, the adequacy of the surgical method used and prognosis were examined using pathohistological findings.

## RESULTS

The patients consisted of 3 males and 3 females, and their age ranged from 57 years to 87 years (mean, 71.5 years). The maximal diameter of the tumors was 0.5 cm in 1 patient, 1.5 cm in 3 patients, and 2.0 cm in 2 patients. Macroscopically, the tumors were of the protruding type (exposed) in 3 patients, the mixed type (predominantly protruding type) in 2 patients, and the ulcerative type in 1 patient. The histological depth of the tumors was up to the mucosa in 1 patient, up to the oddi in 1 patient, up to the panc<sub>0</sub>, du<sub>1</sub> in 1 patient, up to the panc<sub>1</sub>, du<sub>2</sub> in 1 patient, and unknown in 2 patients. Histologically, the tumors were pap-tub in 4 patients and tub<sub>1</sub> in 2 patients. Residual cancer cells around the excised region were positive in 4 patients and unknown in the remaining 2 patients. Resection of the papilla of Vater was chosen because of high risk factors such as advanced age in 2 patients, complicated severe cirrhosis in 2 patients, confinement to bed after intracerebral hemorrhage in 1 patient, and hepatic metastasis observed during surgery in 1 patient. The survival period was 1-5 months in 2 patients, 6 months-1 year in 2

patients, and 1-2 years in 1 patient. The remaining patient is alive 7 years after surgery. The death causes in the 5 patients were the primary disease in 3 patients, hepatic insufficiency in 1 patient, and other cause in 1 patient (Table 1).

## DISCUSSION

Cancer in the papilla of Vater shows a relatively good excision rate and prognosis among cancer in the pancreatic head region. Surgical treatment of cancer in the papilla of Vater is effective, and PD is the well-established standard method. This method has become relatively safe with the improvement of surgical techniques, but the method is highly invasive, and postoperatively severe complications are sometimes reported. With the recent recognition of the importance of postoperative QOL, PpPD and duodenum-preserving pancreatic head resection have become common for the treatment of cancer in the pancreatic head region, taking preservation of functions such as digestion and absorption into consideration. Resection of the papilla of Vater for the treatment of cancer in the papilla of Vater is a less invasive and safer method [1]. However, local excision has the problem of residual cancer cells around the excised region. Knox et al. [2] reported that the survival rate was better by resection of the papilla of Vater than by PD. Goldberg et al. [3] reported that resection of the papilla of Vater was appropriate for elderly patients and poor-risk patients with a small tumor. However, Robertson et al. [4] reported that the death rate by surgery was 25% and the local

TABLE 1.  
*Resection of the duodenal papilla*

Case	Age	Sex	Tumor size (cm)	Macroscopic type	Depth	Histological type	Outcome
1	57	F	1.0×2.0	mixed type (predominant protruded type)	unknown	pap-tub	5 month dead (recurrence)
2	78	M	0.5×0.5	mixed type (predominant protruded type)	oddi	pap-tub	6 month dead (other cause)
3	61	M	1.0×2.0	ulcerative type	unknown	pap-tub	14 day dead (hepatic insufficiency)
4	66	F	1.0×1.5	protruded type (exposed)	panc <sub>0</sub> , du <sub>1</sub>	pap-tub	11 month dead (recurrence)
5	87	F	1.0×1.5	protruded type (exposed)	panc <sub>1</sub> , du <sub>2</sub>	tub <sub>1</sub>	1 year 6 month dead (recurrence)
6	80	M	1.0×1.5	protruded type (exposed)	mucosa	tub <sub>1</sub>	7 year alive

recurrence rate was 50% in the 8 patients who had undergone resection of the papilla of Vater, and indicated that this method should not be a primary choice. Schlippert et al. [5] performed resection of the papilla of Vater in 7 patients, and reported that 1 patient was alive without symptoms of recurrence, but 1 patient died directly and the remaining 5 patients died from recurrence. Kimura et al. [6] reported that one of the 7 patients who had undergone resection of the papilla of Vater was alive, but the remaining 6 patients died of cancer or other diseases, and also reported that the condition around the excised region was  $ew_2$  in 6 of the 7 patients. In resection of the papilla of Vater, since resection of lymph nodes and postoperative pathological examination are difficult, and since metastasis to lymph nodes and infiltration to vessels are sometimes observed even in early cancer, this method is not considered suitable for radical treatment. In our department, we performed resection of the papilla of Vater in 2 patients with early cancer, and residual cancer cells around the excised region were positive in both patients, but one of them is alive without symptoms of recurrence 7 years after surgery. Recently, there have been a growing number of studies on the endoscopic resection of the papilla of Vater in patients with cancer in the papilla of Vater, taking high surgical invasiveness into consideration, but residual cancer cells around the excised region are also reported [7,8]. As the complications of endoscopic resection of the papilla of Vater, acute pancreatitis, hemorrhage and cholangitis are reported, but no fatal complications have been noted [9]. Resection of the papilla of Vater is not a radical treatment, but this method is considered appropriate for elderly patients and patients with systemic com-

plications but without pancreatic infiltration or metastasis to lymph nodes detected by preoperative imaging.

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