Results

Lymph node metastases according to standard and extended staging are shown in *Table 1*. By applying extended staging, N-stage migration was observed in 1 per cent (1 of 82) of patients with N1 disease, 20 per cent (12 of 59) with N2, 43 per cent (10 of 23) with N3 and 8·8 per cent (23 of 260) of all patients. The final staging is shown in *Table 2*. Overall stage migration occurred in 9 per cent (five of 58) of patients with stage IIIa disease, 19 per cent (8 of 42) with stage IIIb, 56 per cent (9 of 16) with stage IVa and 8·5 per cent (22 of 260) of all patients.

Table 3 shows lymph node metastases classified according to depth of invasion. Metastases to N4 nodes were found in 4 per cent (four of 95) of tumours invading the subserosa and 17·4 per cent (19 of 109) of tumours penetrating the serosa. The overall incidence of N4 involvement was 8·8 per cent (23 of 260).

Discussion

This study has clarified the incidence of microscopic metastases in patients with T2ss–4 M0 tumours and macroscopically negative para-aortic nodes.

Limited nodal dissection often provides inaccurate staging. Bunt *et al.*[14] analysed the migration effects in Japanese Gastric Cancer Association staging from the results of D1 and D2 surgery in a Dutch phase III trial and found that the rate of stage migration was 30 per cent when D2 surgery was applied instead of D1[14]. They also calculated the stage-specific survival rate based on reported survival rates and stage migration, and clarified that stage migration could improve stage-specific survival without a real survival benefit from D2 lymphadenectomy[14].

In this study, N-stage migration occurred in 8·8 per cent and overall stage migration was noted in 8·5 per cent of patients by applying extended staging instead of standard D2 staging. N- and stage-specific survival may therefore be improved owing to N stage and overall stage migration. Some Japanese surgeons have reported that extended nodal dissection can improve overall survival in patients with N2 tumours compared with standard D2 dissection[9,13]. These survival differences could be explained, in part, by the N-stage migration observed in this study. There seems no sense, therefore, in comparing D2 and more extended dissection by retrospective survival analyses based on the Japanese Gastric Cancer Association staging system.

Extended para-aortic lymphadenectomy influences Japanese Gastric Cancer Association staging and UICC–TNM staging. Metastases to para-aortic nodes are treated as distant metastases (M1) by TNM staging[11]. According to eligibility criteria in the present study, patients with metastases to distant organs such as liver and peritoneum were excluded. Para-aortic nodes were also negative macroscopically. The present results demonstrate that 8·8 per cent (23 of 260) of patients with T2ss–4 M0 gastric cancer and macroscopically negative para-aortic nodes have microscopic para-aortic nodal metastases. These patients then become classified as M1, so that extended lymphadenectomy causes M-stage migration, impacting on M-specific survival in the TNM classification.

In the present study, nodal metastases to N4 were observed in 8·8 per cent (23 of 260) of all patients and these positive nodes were found in 4 per cent (four of 95)

Table 1 Staging and migration of lymph node metastases

	Standard staging				Extended
	N0	N1	N2	N3	total
Extended staging					
N0	96				96
N1		81			81
N2			47		47
N3				13	13
N4		1	12	10	23
Standard total	96	82	59	23	260

Table 2 Disease stage and stage migration

	Standard staging							Extended
	Ia	Ib	II	IIIa	IIIb	IVa	IVb	total
Extended staging								
Ia	10							10
Ib		67						67
II			64					64
IIIa				53				53
IIIb					34			34
IVa						7		7
IVb				5	8	9	3	25
Standard total	10	67	64	58	42	16	3	260

Table 3 Depth of invasion and lymph node metastases

	Lymph node metastasis					
	N0	N1	N2	N3	N4	Total
Depth of invasion						
M	3					3
SM	7	4				11
MP	19	14	3	1		37
SS	44	28	14	5	4	95
SE	22	35	28	5	19	109
SEI	1		2	2		5
Total	96	81	47	13	23	260

M, mucosa; SM, submucosa; MP, muscular is propria; SS, subserosa; SE, serosa exposed; SEI, serosa exposed and invading adjacent organs.

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of tumours invading the subserosa and 17·4 per cent (19 of 109) of tumours penetrating the serosa. Previous Japanese studies have reported that 20–30 per cent of patients with non-early gastric cancer had histological metastasis in the para-aortic nodes[5–8]. The present study confirmed N4 disease in localized advanced gastric cancer invading the subserosa or deeper. The slightly lower incidence of this finding in the present compared with previous studies may have been due to the inclusion of patients with macroscopically involved para-aortic nodes in the earlier studies.

Extended para-aortic lymphadenectomy for T2ss–4 M0 gastric cancer provides a revised nodal staging. This results in stage migration that may improve stage-specific survival regardless of a real survival benefit.

Acknowledgements

This work was supported by a Grant-in-Aid for Cancer Research from the Ministry of Health and Welfare, and the Second Term Comprehensive 10-year Strategy for Cancer Control by the Ministry of Health and Welfare, Japan.

The authors thank Dr B. G. Mann for advice on the preparation of this manuscript and Mrs K. Hongo for assistance in data management. Participating institutions (in order of patient recruitment) were National Cancer Centre Hospital, Niigata Cancer Centre Hospital, National Shikoku Cancer Centre, Osaka Medical Centre for Cancer and Cardiovascular Diseases, Osaka National Hospital, National Cancer Centre East, Tokyo Metropolitan Komagome Hospital, Aichi Cancer Centre, Osaka Medical College, International Medical Centre of Japan, Sakai City Hospital, Kanagawa Cancer Centre, Tokyo Metropolitan Bokuto Hospital, Nagaoka Chuo General Hospital, Niigata City General Hospital, Cancer Institute Hospital, Kyoto Second Red Cross Hospital, Saitama Cancer Centre, Hiroshima City Hospital, Kanazawa University (Gastroenterologic Surgery), Gifu Municipal Hospital, Kagoshima University, Iwate Medical University (Department of Surgery 1), Okayama University.

References

1 Roder DM. The epidemiology of gastric cancer. *Gastric Cancer* 2002; 5(Suppl 1): 5–11.
2 Sasako M. Principles of surgical treatment for curable gastric cancer. *J Clin Oncol* 2003; **21**(Suppl): 274S–275S.
3 Nakajima T. Gastric cancer treatment guidelines in Japan. *Gastric Cancer* 2002; **5**: 1–5.
4 Noguchi Y, Imada T, Matsumoto A, Coit DG, Brennan MF. Radical surgery for gastric cancer. A review of the Japanese experience. *Cancer* 1989; **64**: 2053–2062.
5 Takahashi S. Study of para-aortic lymph node metastasis of gastric cancer subjected to superextensive lymph node dissection. *Nippon Geka Gakkai Zasshi* 1990; **91**: 29–35.
6 Kitamura M, Arai K, Iwasaki Y. Clinico-pathological studies and problems on para-aortic lymph node dissection – D4 dissection. *Nippon Geka Gakkai Zasshi* 1996; **97**: 302–307.
7 Isozaki H, Okajima K, Fujii K, Nomura E, Izumi N, Mabuchi H *et al.* Effectiveness of paraaortic lymph node dissection for advanced gastric cancer. *Hepatogastroenterology* 1999; **46**: 549–554.
8 Baba M, Hokita S, Natsugoe S, Miyazono T, Shimada M, Nakano S *et al.* Paraaortic lymphadenectomy in patients with advanced carcinoma of the upper-third of the stomach. *Hepatogastroenterology* 2000; **47**: 893–896.
9 Kunisaki C, Shimada H, Yamaoka H, Wakasugi J, Takahashi M, Akiyama H *et al.* Significance of para-aortic lymph node dissection in advanced gastric cancer. *Hepatogastroenterology* 1999; **46**: 2635–2642.
10 Japanese Research Society for Gastric Cancer. *Japanese Classification of Gastric Carcinoma* (1st English edn). Kanehara & Co: Tokyo, 1995.
11 Sobin LH, Wittekind C. *International Union Against Cancer. TNM Classification of Malignant Tumours* (5th edn). Wiley-Liss: New York, 1997.
12 Keighley MRB, Moore J, Roginski C, Powell J, Thompson H. Incidence and prognosis of N4 node involvement in gastric cancer. *Br J Surg* 1984; **71**: 863–866.
13 Gunji Y, Suzuki T, Kobayashi S, Hori S, Hayashi H, Shimada H *et al.* Evaluation of D3/D4 lymph node dissection for patients with grossly N2 positive advanced gastric cancer. *Hepatogastroenterology* 2003; **50**: 1178–1182.
14 Bunt AMG, Hermans J, Smit VT, van de Velde CJH, Fleuren GJ, Bruijn JA. Surgical/pathologic-stage migration confounds comparisons of gastric cancer survival rates between Japan and Western countries. *J Clin Oncol* 1995; **13**: 19–25.
15 Sano T, Sasako M, Yamamoto S, Nashimoto A, Kurita A, Hiratsuka M *et al.* Gastric cancer surgery: morbidity and mortality results from a prospective randomized controlled trial comparing D2 and extended para-aortic lymphadenectomy – Japan Clinical Oncology Group study 9501. *J Clin Oncol* 2004; **22**: 2767–2773.

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Surg Today (2006) 36:633–637
DOI 10.1007/s00595-006-3214-9

SURGERY TODAY
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An Icteric Type Hepatocellular Carcinoma with No Detectable Tumor in the Liver: Report of a Case

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Abstract
A 70-year-old man was admitted to our hospital with obstructive jaundice. Computed tomography revealed a tumor in the left intrahepatic bile duct extending to the common bile duct without any significant lesions in the liver. Cholangiography showed a filling defect due to an intraductal tumor. Cytology of the bile juice was negative and tumor markers were carcinoembryonic antigen 5.7 ng/ml, carbohydrate antigen 19-9 49 U/ml, α-fetoprotein 9 ng/dl, and PIVKA-II 19200 AU/ml. With a preoperative diagnosis of hilar bile duct carcinoma, a laparotomy was performed. The common bile duct was filled with a tumor and it extended into the bilateral intrahepatic bile ducts. The intraductal tumor was removed together with the extrahepatic bile ducts. An intraoperative histological examination of the tumor showed a well-differentiated hepatocellular carcinoma. No lesions were detected in the liver by ultrasonography, palpation during the operation, or a computed tomography scan after the operation. At 1 year postoperatively, no recurrence has been seen in this patient.

Key words Icteric type hepatocellular carcinoma · Intraductal growth · Obstructive jaundice

Introduction

Jaundice usually occurs in the later stage of hepatocellular carcinoma (HCC) due to underlying liver cirrhosis or extensive hepatic parenchymal invasion of the tumor. However, obstructive jaundice associated with HCC is a rare initial symptom caused by intraductal tumor growth, the migration of tumor necrosis, blood clots within the biliary tract, or compression of the biliary tract by the tumor.[1–6] These types have been classified as icteric type HCC by Lin et al.[2] Since Mallory et al.[1] first described a case of HCC accompanied with obstructive jaundice secondary to biliary hemorrhage from a tumor invading the cystic duct, a number of similar reports have been found in the literature.[3,7–10] In most of these cases, the main tumors were detected in the liver. We herein report a case of a successful resection of an icteric type HCC without a detectable original tumor in the liver.

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Received: May 2, 2005 / Accepted: January 17, 2006

Case Report

A 70-year-old man was admitted to our hospital because of obstructive jaundice with a diagnosis of unresectable hilar carcinoma. He had undergone bilateral percutaneous transhepatic cholangiodrainage (PTCD) for the relief of the jaundice at a previous hospital. Cholangiography through the PTCD tube showed a filling defect (about 8 cm in length) due to a intraductal thrombi through the left intrahepatic bile duct into the common bile duct at the level of the origin of cystic duct (Fig. 1A) and a variation of the bile duct was seen (Fig. 1B). Computed tomography (CT) revealed an enhanced mass extending through the left intrahepatic bile duct into the common bile duct with dilatation of the bilateral intrahepatic bile ducts, but without any tumor in the liver or lymph node swelling (Fig. 2). Angiography revealed neither an encasement of blood vessels nor tumor staining in the liver (data not shown). Cytology of the bile juice was negative. The serum tumor markers were as follows: carcinoembryonic antigen (CEA) 5.7 ng/ml, carbohydrate antigen (CA) 19-9 49 U/ml, α-fetoprotein (AFP) 9 ng/dl, and PIVKA-II 19200 AU/ml. Serologically, hepatitis B surface antigen was negative and hepatitis C virus antibody was positive. A final preoperative diagnosis was made

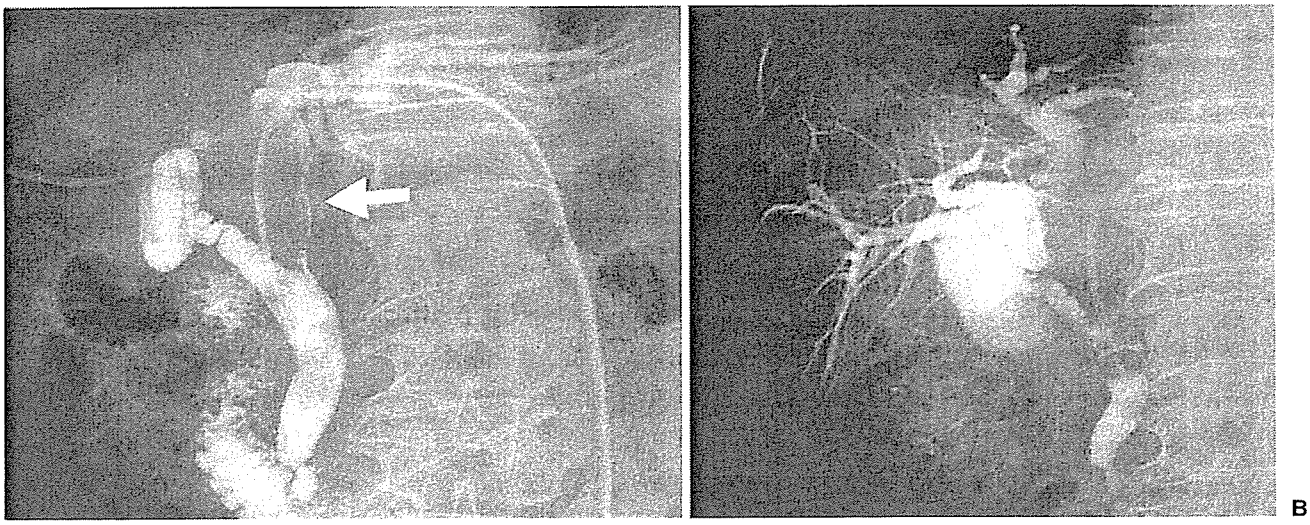

Fig. 1A,B. Cholangiography. **A** A filling defect (*arrow*) can be seen in the left intrahepatic bile duct into the common bile duct due to the intraductal tumor. Cholangiography through the left percutaneous transhepatic cholangiodrainage (PTCD) tube. **B** A variation of the bile duct is seen. Imaging of the cystic duct and gallbladder is enhanced by cholangiography through the right PTCD tube

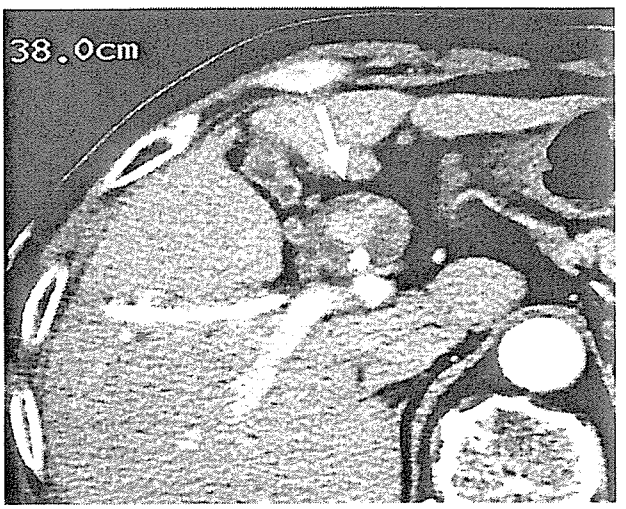

Fig. 2. Abdominal computed tomography. A mass (*arrow*) is seen in the left intrahepatic bile duct into the common bile duct

Fig. 3. Resected specimens of the bile ducts and the intraductal tumor. (*White arrow*, left intrahepatic bile duct; *black arrow*, B4; *white arrowhead*, right intrahepatic bile duct; *black arrowhead*, cystic duct

of bile duct carcinoma with papillary growth developing into the intrahepatic bile duct, and a laparotomy was carried out. The surface of the liver was rough and hard with cirrhotic changes. We first resected the common bile duct with the gallbladder and found the common bile duct to be filled with a tumor extending into the bilateral intrahepatic bile duct. An intraoperative frozen biopsy of the tumor revealed hepatocellular carcinoma indicating "tumor thrombi" in the bile duct. The intraductal tumor was removed together with the extrahepatic bile ducts (Fig. 3). The bilateral cut ends of the extrahepatic bile ducts were negative. Intraoperative ultrasonography and cholangioscopy showed no other lesion in the liver and the remnant bile duct through the secondary branch of the biliary tree. Reconstruction by a choledochojejunostomy was performed. A postoperative histological examination showed that the tumor itself was a well differentiated HCC (Fig. 4). The resected bile ducts were confirmed to be free from tumor involvement. The postoperative course was uneventful and at 1 year postoperatively the patient remains recurrence-free.

Discussion

Although HCCs frequently invades the portal and hepatic veins, an invasion of the bile duct causing

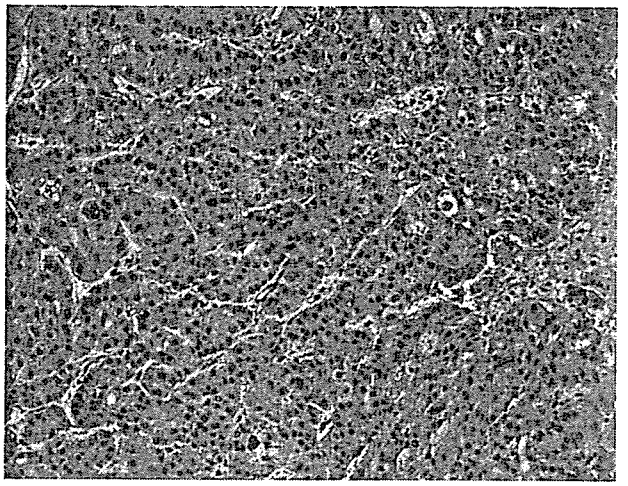

Fig. 4. Histopathological microscopy shows well-differentiated hepatocellular carcinoma (H&E, ×20)

obstructive jaundice is a rare phenomenon, namely, 0.2%–4.9% of such patients demonstrate HCC at the time of diagnosis.[6,11–14] Lin et al.[2] classified these tumors to be "icteric type hepatomas" and they classified them into the following three types by means of biliary obstruction:[6,11,15] tumor encasement of the biliary system at the hepatic duct (type 1), filling of free-tumor fragments or blood clots from the tumor (type 2), and extrinsic compression due to an enlarged tumor or malignant lymph node at the hepatic hilum (type 3). According to the classification of Lin et al., the present case was classified as type 2 icteric type HCC because we could not detect any tumor in the liver using either intraoperative ultrasonography, cholangioscopy, or postoperative CT.

In most cases of the icteric type of HCC, the main tumor is usually detected in the liver, thus it is a rare phenomenon that the original tumor is not detectable in the liver, as was seen in our case. We reviewed eight similar cases[16,17] (Table 1). In these cases, the origin of the tumor thrombi in the bile duct was believed to be (1) from the lesion of HCC in the liver, or (2) from ectopic liver tissue in the bile duct. We could not find any tumor in the liver in the present case, and it is thus difficult to clearly define the origin of the tumor thrombi.

The diagnosis of the icteric type of HCC without a detectable main tumor in the liver is difficult. In the reviewed cases with the available data, all of the preoperative diagnoses were bile duct carcinoma (BDC) or bile duct tumor (BDT). Although none of these cases was diagnosed to have HCC preoperatively, the serum AFP levels[11] and imaging examination including CT,[18] endoscopic retrograde cholangiography (ERC),[14,15] percutaneous transhepatic cholangiography,[14,15] and

Table 1. Collected cases from the literature of icteric type hepatocellular carcinoma without a detectable tumor in the liver

Case	Age (years)	Sex	HBs Ag	HCV Ab	AFP	PIVKA-II	Location of the tumor thrombi	Preoperative diagnosis	Therapy	Histology	Patterns of recurrence	Outcome (after operation)
1	62	F	—	—	5	—	CBD	BDC	—	—	—	Died (3 months)
2	59	M	No	—	17.5	—	rt IHBD–CBD	BDT	Thrombectomy	Mod.	—	Died (1 year)
3	65	M	No	Yes	12.7	2.6	B5 branch–rt EHBD	BDC or mixed HCC	Liver resection	Mod. + poor	—	Alive (5 months)
4	53	M	Yes	No	21	—	B3 branch–CBD	BDC	Thrombectomy	—	IH	Died (8 months)
5	55	F	No	—	<5	N.D.	Anterior branch	BDC	Thrombectomy, liver resection	Poor	IH	Died (5 months)
6	35	M	Yes	No	6	9	lt HBD	BDC	Thrombectomy, liver resection	Poor	IH	Died (3 years)
7	57	F	—	—	—	—	CBD	—	Thrombectomy	—	IH	Died (41 months)
8	48	M	—	—	—	—	rt IHBD–CBD	—	Thrombectomy	—	IH	Died (10 months)
9 (present case)	70	M	Yes	No	9	19200	lt IHBD–CBD	BDC	Thrombectomy	Well		Alive (12 months)

HBs Ag, hepatitis B surface antigen; HCV Ab, hepatitis C virus antibody; AFP, alpha-fetoprotein; N.D, not done; CBD, common bile duct; IHBD, intrahepatic bile duct; EHBD, extrahepatic bile duct; BDC, bile duct carcinoma; BDT, bile duct tumor; IH, intrahepatic metastasis; —, no data available; lt, left; rt, right; HCC, hepatocellular carcinoma; Mod., moderate

magnetic resonance cholangiography[19] could be helpful for the differential diagnosis between BDC (BDT) and HCC. Among them, the cholangiograms could be the most helpful in the case of negative tumor markers. Intraluminal filling defects and irregular cutting surface, which were found to be blood clots or necrotic tumor debris, are different from the conventional cholangiographic appearance of BDC.[15] A retrospective analysis in the present case did not show a typical intraluminal filling defect as is the case with BDC. The elevation of PIVKA-II and the positive HCV markers, which we overlooked in the present case, would thus be helpful for accurately diagnosing this type of HCC although the PIVKA-II level may not be reliable in the presence of obstructive jaundice. Based on previous reports, the icteric type of HCC shows invasive growth and no tumor capsule formation such as seen in hilar cholangiocarcinoma,[13,18,19] while the tumor did not show any invasive growth in the present case. An accurate diagnosis, however, cannot be reached until either tumor biopsies or a resection is performed.[20]

Although the ideal treatment of the icteric type of HCC would be a complete extirpation of the tumor, the same as for other malignant tumors, the total resection rate of these tumors is very low.[6,11,13–15,19,21,22] One of the reasons for this may be due to the hepatic parenchymal insufficiency exaggerated by persistent obstructive jaundice and the low hepatic reserve function associated with cirrhosis. Immediate biliary drainage is recommended for icteric type HCC and an operation should be performed after the relief of jaundice and a subsequent evaluation of the hepatic reserve function.[12,21] According to the operative methods in our reviewed cases, 5 out of the 8 cases, including our case, received a thrombectomy through a choledochotomy while 3 cases received a hepatic resection with a thrombectomy. Regarding the surgical procedures in the three patients who underwent a hepatic resection, a hepatic lobectomy was performed in two patients and a segmentectomy in one to resect the intrahepatic bile duct and the tumor thrombus in it. In two of these three cases, based on the available information, no main tumors were detected in the resected specimens. In the present case, however, the liver function was estimated preoperatively to marginally allow the performance of a left hepatic lobectomy, and the low functional level was confirmed as being due to obvious cirrhosis. To avoid liver dysfunction after the operation we considered that a resection of the extrahepatic bile ducts should be sufficient to complete the tumor removal because of the lack of any detectable tumors in the secondary branch of the biliary tree as assessed by intraoperative cholangioscopy and intraoperative ultrasonography. Although a hepatic resection for regional tumors of the intrahepatic bile duct is usually necessary when performing a curative resection for this type of HCC, a complete thrombectomy with a choledochotomy may therefore be adequate if the negative cut ends of the bile ducts and the absence of regional intrahepatic tumors can be confirmed, as in the present case.

The prognosis of icteric type HCC has been reported to be poor[11–13,15] although Lau et al.[6] reported, in a study of 49 icteric type HCC patients, that the overall survival of these patients was similar to that of HCC patients with no jaundice and he concluded that a good palliation and occasional cure were possible with proper treatment. However, the icteric type of HCC with no detectable hepatic tumor has a poor prognosis as in our reviewed cases, although it is necessary to collect more similar cases with a longer-term follow-up for a better evaluation of the prognosis. Regarding the patterns of recurrence in the icteric type of HCC with no detectable main tumor, intrahepatic metastases, one of which might be the origin of the intraductal tumor, developed in all five patients based on the available information. Moreover, these recurrent cases included two patients who had undergone a thrombectomy with a liver resection. Considering this, the difficulty in accurately determining to optimal degree of a liver resection might thus influence the poor prognosis of ictric type HCC with no detectable hepatic tumors, if the tumor thrombi in the bile duct originate from a lesion in the liver. A postoperative examination of the liver thus seems to be important for the early detection of recurrence, and at the very least, a curative surgical resection and postoperative intensive monitoring of potential hepatic lesions are necessary to improve the prognosis.

References

1. Mallory TB, Castleman B, Parris EE. Case records of Massachusetts General Hospital, case 33441. N Engl J Med 1947;237:673–6.
2. Lin TY, Chen KM, Chen YR, Lin WS, Wang TH, Sung JL. Icteric type hepatoma. Med Chir Dig 1975;88:267–70.
3. Kojiro M, Kawabata K, Kawano Y, Shirai F, Takemoto N, Nakashima T. Hepatocellular carcinoma presenting as intrabile duct tumor growth. A clinicopathological study of 24 cases. Cancer 1982;49:2144–7.
4. Lee KC, Sakai K, Kinoshita H, Hirohashi K, Tsuji Y, Kubo S, et al. Resection of hepatocellular carcinoma with obstructive jaundice caused by compression of the common hepatic duct. J Surg Oncol 1988;39:201–5.
5. Ueda M, Takeuchi T, Takahashi K, Okamoto S, Tanaka A, Morimoto T, et al. Classification and surgical treatment of hepatocellular carcinoma (HCC) with bile duct thrombi. Hepatogastroenterology 1994;41:349–54.
6. Lau WL, Leung K, Leung TWT, Liew CT, Chan MSY, Yu SCH, et al. A logical approach to hepatocellular carcinoma presenting with jaundice. Ann Surg 1997;225:281–5.
7. Johns W, Zimmerman A. Biliary obstruction due to hemobilia caused by liver cell carcinoma. Ann Surg 1961;153:706–10.
8. Dickinson SJ, Santulli T. Obstruction of common bile duct by hepatoma. Surgery 1962;52:800–2.

9. Jurco S, Kim H. Extrahepatic biliary obstruction by hepatocellular carcinoma. Am J Gastroenterol 1980;74:176–8.
10. Cleland P, Adjukiewicz A. Hepatoma and obstructive jaundice. Postgrad Med J 1980;56:371–2.
11. Chen MF, Jan YY, Jeng LB, Hwang TL, Wang CS, Chen SC. Obstructive jaundice secondary to ruptured hepatocellular carcinoma into the common bile duct. Cancer 1994;73:1335–40.
12. Shimada M, Takenaka K, Hasegawa H, Shirabe K, Gion T, Kano T, et al. Hepatic resection for icteric type hepatocellular carcinoma. Hepatogastroenterology 1997;44:1432–7.
13. Huang GT, Sheu JC, Lee HS, Lai MY, Wang TH, Chen DS. Icteric type hepatocellular carcinoma: revisited 20 years later. J Gastroenterol 1998;33:53–6.
14. Lau WY, Leow CK, Leung KL, Leung TW, Chan MSY, Yu SCH. Cholangiographic features in the diagnosis and management of obstructive icteric type hepatocellular carcinoma. HPB Surg 2000; 11:299–306.
15. Wu CS, Wu SS, Chen PC, Chiu CT, Lin SM, Jan YY, et al. Cholangiography of icteric type hepatoma. Am J Gastroenterol 1994;89:774–7.
16. Peng SY, Wang JW, Liu YB, Cai XJ, Deng GL, Xu B, et al. Surgical intervention for obstructive jaundice due to biliary tumor thrombus in hepatocellular carcinoma. World J Surg 2004;28: 43–6.
17. Kondo M, Dono K, Sakon M, Nagano H, Hayashi T, Umeshita K, et al. Two cases of hepatocellular carcinoma with bile duct invasion, but without a detectable tumor in the liver (in Japanese with English abstract). Jpn J Gastroenterol Surg 2003;36:482–7.
18. Soyer P, Sibert A, Laissy JP. Intrahepatic bile duct dilatation secondary to hepatocellular carcinoma: CT features in 10 patients. Abdom Imaging 1995;20:114–7.
19. Tseng JH, Hung CF, Ng KK, Wan YL, Yeh TS, Chiu CT. Icteric type hepatoma: magnetic resonance imaging and magnetic resonance cholangiographic features. Abdom Imaging 2001;26: 171–7.
20. Murakami Y, Yokoyama T, Kanehiro T, Uemura K, Sasaki M, Morifuji M, et al. Successful diagnosis and resection of icteric type hepatocellular carcinoma. Hepatogastroenterology 2003;50: 1634–6.
21. Tada K, Kubota K, Sano K, Noie T, Kosuge T, Takayama T, et al. Surgery of icteric-type hepatoma after biliary drainage and transcatheter arterial embolization. Hepatogastroenterology 1999;46:843–8.
22. Jan YY, Chen MF. Obstructive jaundice secondary to hepatocellular carcinoma into the common bile duct: choledochoscopic findings. Hepatogastroenterology 1999;46:157–61.

● 症 例 ●

TS-1+CDDP療法1コースにてCRとなった進行胃癌の1例

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土屋 嘉昭*1 田中 乙雄*1 太田 玉紀*2

〔*Jpn J Cancer Chemother* 33(6): 807-809, *June,* 2006〕

Advanced Gastric Cancer Responding to Pathological CR after Neoadjuvant TS-1 Combined with CDDP Therapy —Report of a Case: Yasunori Tsuchiya*1, Atsushi Nashimoto*1, Satoru Nakagawa*1, Hiroshi Yabusaki*1, Yasumasa Takii*1, Yoshiaki Tsuchiya*1, Otsuo Tanaka*1 and Tamaki Ohta*2 (*1*Dept. of Surgery, Niigata Cancer Center Hospital,* *2*Dept. of Pathology, Niigata Cancer Center Hospital*)

Summary

A 54-year-old woman with advanced gastric cancer was referred to our hospital. Because it was the yearend, we selected neoadjuvant TS-1 combined with CDDP therapy. TS-1 (60 mg bid) was administered orally for 21 consecutive days, and CDDP (60 mg/m²) was infused intravenously on day 8. One course was completed without serious toxicities. The primary tumor revealed partial response (PR) with no lymph node metastasis judged from barium meal study and upper GI endoscopic findings. After 3 weeks, a simple total gastrectomy with lymph node dissection was performed. The pathological diagnosis proved that there were no cancer cells in the primary lesion or regional lymph nodes, suggesting a complete response (CR) to chemotherapy. The postoperative course was uneventful, and she has been fine as an outpatient. Key words: TS-1+CDDP therapy, Advanced gastric cancer, Neoadjuvant chemotherapy (NAC), Complete response (CR) (*Received Jul. 15, 2005/Accepted Dec. 13, 2005*)

要旨 症例は54歳，女性。空腹時胃部不快感にて近医を受診し，胃体中部の3型胃癌（por 2）を指摘され当科紹介となる。年末のため，TS-1/CDDP療法による術前化学療法（NAC）を1コース施行後，手術を行う方針とした。化学療法後，胃X線および上部消化管内視鏡検査にて原発巣の縮小を認め，PRと判定した。約3週間の休薬期間後，胃全摘術が施行された。切除標本の肉眼的所見は3型胃癌でsSE，sN 1，sH 0，sP 0，sM 0，CY 0，Stage IIIAであった。しかし，病理組織学的所見では高度線維化を認めるのみで胃癌組織は消失しており，リンパ節転移もなく組織学的効果判定はGrade 3であった。術後経過は順調で外来での補助化学療法はせずに経過観察中である。

はじめに

進行胃癌に対するTS-1+CDDP療法は，その奏効率の高さから注目されており[1]，われわれも高度進行胃癌あるいは根治切除不能と診断された胃癌症例に対し，2000年10月よりTS-1+CDDP療法を2コース施行してきた[2]。今回われわれは，根治術が可能と考えられた進行胃癌症例に対して，手術待機中に術前化学療法（NAC）としてTS-1+CDDP療法を施行したところ，病理組織学的CRが得られた症例を経験したので報告する。

I. 症 例

症例: 54歳，女性。

主訴: 空腹時上腹部不快感。

既往歴・家族歴: 特記すべき事項なし。

現病歴: 2004年夏ごろより空腹時上腹部不快感にて発症。12月に近医を受診し，上部消化管内視鏡検査にて胃体中部・小弯に3型胃癌を指摘され，生検でも低分化腺癌（por）と診断された。12月中旬，当科紹介受診した。年末のため，外来にて術前化学療法を施行する方針とし，

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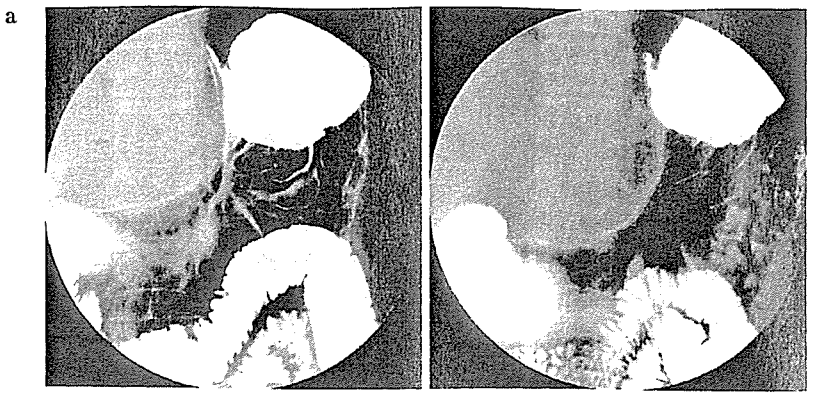

図 1 上部消化管造影
a: 化学療法前
胃体中部・小弯から後壁にかけて不整形のやや深い陥凹と陥凹辺縁で途絶する fold の集中を認めた。
b: 化学療法後
陥凹面の縮小化，集中する fold の平坦化を認めた。

図 2 上部消化管内視鏡検査および化学療法前の生検組織
a: 胃体上部から胃体下部・小弯から後壁にかけて 3 型胃癌を認めた。
b: 深く陥凹した潰瘍面を biopsy したところ中分化型管状腺癌（tub 2）～充実型低分化型腺癌（por 1）と診断された。
c: 化学療法終了後，病変の縮小化，平坦化が認められた。

TS-1＋CDDP 療法（TS-1 120 mg/day，21 日間連続経口投与，CDDP day 8 に 60 mg/m²を点滴静注）を開始した。治療中，軽度の悪心，食欲低下が出現したが重篤な有害事象は認められなかった。1 コース終了後，約 3 週間の休薬期間をおき，手術目的にて当科入院となった。

入院時現症: 身長 153 cm，体重 68 kg。眼球結膜に黄疸なし。眼瞼結膜に貧血なし。胸腹部に異常所見なし。Virchow リンパ節は触知せず。Schnitzler 転移は認めなかった。

検査成績: GOT 71 IU/*l*，GPT 68 IU/*l*，γ-GTP 107 IU/*l* と軽度の肝機能異常を認めたが，その他の血液・生化学検査には異常を認めず，腫瘍マーカーはすべて正常範囲内であった。

胃 X 線検査: 胃体中部・小弯を中心に不整形の陥凹と陥凹辺縁で途絶する fold の集中を認めた（図 1 a）。化学療法終了後，陥凹の縮小化，集中する fold の軽減化が認められた（図 1 b）。画像上の縮小率は 2 方向測定で 58% であり，partial response（PR）と判定した。

上部消化管内視鏡検査: 胃体上部から胃体下部・小弯から後壁にかけて 3 型胃癌を認め（図 2 a），深い陥凹面から生検したところ中分化型管状腺癌（tub 2）～充実型低分化型腺癌（por 1）と診断された（図 2 b）。化学療法後，病変の縮小化，平坦化を認め（図 2 c），内視鏡上も PR と判定した。

腹部 CT 検査: 主病巣は描出されず，転移を示唆する所見は認められなかった。

入院後経過: 胃体中部・小弯から後壁にかけての進行胃癌との診断にてリンパ節郭清を伴う胃全摘術を施行し，Roux-en Y 吻合にて再建した。術後経過は良好で第 14 病日に退院した。

切除標本肉眼所見: 病変は MU 領域小弯に存在し，腫瘍径 60×60 mm の 3 型胃癌と思われた（図 3 a）。肉眼的には T 3(SE)，N 1，H 0，P 0，CY 0，Stage IIIA と診断した。

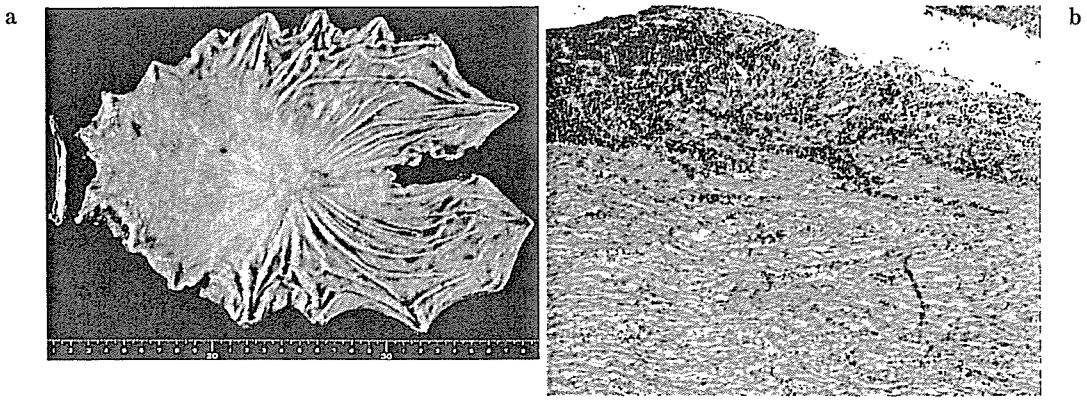

図 3　摘出標本および病理組織像
a: 病変は MU 領域小彎中心に存在し，腫瘍径 60×60 mm の IIc 類似進行胃癌と思われた。
b: 階段状切片にて病変全体を検索したが，高度線維化を認めるのみで癌細胞の遺残はなかった。

病理組織学的所見: 段階状半連続切片にて検索したが，高度線維化を認めるのみで癌細胞の遺残は認められなかった（図 3 b)。所属リンパ節には転移を認めず，胃癌取扱い規約第 13 版[3]の薬物の組織学的効果判定基準に準じて Grade 3 と診断した。術後補助療法は施行していない。術後 6 か月を経過したが，現在のところ再発兆候なく元気に外来通院中である。

II. 考　察

TS-1＋CDDP 療法[1]は TS-1＋CPT-11 療法や CPT-11＋CDDP 療法[4]などとともに第 I / II 相試験において高い奏効率を示した。また，安全性，コンプライアンスのよさより，近年好んで用いられており，われわれも NAC として TS-1＋CDDP 療法を行っている。以前に原発巣の癌組織は消失し，周囲のリンパ管内微小癌組織が存在した症例を報告したが[5]，病理学的に CR が得られる症例は非常にまれである。本症例は根治術が可能な進行胃癌であったが，年末にかかるという時期的・社会的な特殊性により，JACCRO GC-01 のプロトコールにのっとり TS-1＋CDDP 療法を NAC として 1 コースのみ施行後，手術することとなった。術後，摘出標本を肉眼的に検索した時点では著明な病変の縮小はあったが，原発巣の遺残，No. 3 リンパ節転移陽性と判断した。しかし，病理組織学的検索にて原発巣・所属リンパ節ともに癌細胞をまったく認めず，高度な成熟した線維化の所見を呈するのみであり，病理組織学的 CR と判定された。高度線維化は主病巣の漿膜下層（SS）まで及んでおり，さらに No. 3 リンパ節にも同様の所見が認められた。この所見は，かなり早い段階で化学療法が奏効していたことを示唆しており，薬剤感受性が非常に良好な癌腫であったと同時に癌細胞量が比較的少なかった可能性もある。また，化学療法施行前はリンパ節転移を有する，深達度 SS の進行胃癌と考えられ，手術により切除しきれない微小転移巣を有していた可能性も否定できない。実験的レベルではあるが，原発巣切除に伴う tumor dormancy の解除，また手術操作による surgical stress で癌転移が増強する[6]ことは実証されている。本症例の場合は，NAC 後における微小転移の残存は考えにくい。遺残した癌細胞の再発・転移の危険性を著しく軽減したと思われる本化学療法の果たした役割は大きい。このような観点においても，現在 JCOG で術前治療なしでは根治切除が困難か，根治切除が行えても予後が極めて不良な高度リンパ節転移を有する胃癌に対する術前補助化学療法として，TS-1＋CDDP 療法の有効性と安全性の評価が行われているが，結果がたいへん興味深い。今後は根治術が可能と思われる進行胃癌症例に対し，術後補助化学療法から術前補助化学療法にパラダイムシフトする方向性を考慮すべき時期にきているのかもしれない。

文　献

1) Koizumi W, Tanabe S, Saigenji K, *et al*: Phase I / II study of S-1 combined with cisplatin in patients with advanced gastric cancer. *Br J Cancer* **89**(12): 2207-2212, 2003.
2) 藪崎　裕, 梨本　篤, 田中乙雄: 高度進行胃癌に対する術前化学療法としての TS-1/CDDP 併用療法の意義. 癌と化学療法　**30**(12): 1933-1940, 2003.
3) 日本胃癌学会・編: 胃癌取扱い規約. 第 13 版, 金原出版, 東京, 1999.
4) Boku N, Ohtsu A, Shirao K, *et al*: Phase II study of a combination of irinotecan and cisplatin against metastatic gastric cancer. *J Clin Oncol* **17**: 319-323, 1999.
5) 亀山仁史, 梨本　篤, 藪崎　裕・他: TS-1/CDDP 術前化学療法が奏効し原発巣が消失した進行胃癌の 1 例. 癌と化学療法　**30**(10): 1485-1488, 2003.
6) Tsuchiya Y, Sawada S, Yoshioka I, *et al*: Increased surgical stress promotes tumor metastasis. *Surgery* **133**: 547-555, 2003.

● 症 例 ●

Paclitaxel＋Low-Dose FP 術前化学療法が奏効し原発巣が消失した進行胃癌の1例

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〔*Jpn J Cancer Chemother* 33(8): 1163-1166, *August*, 2006〕

A Case of Advanced Gastric Cancer Responding Remarkably to Paclitaxel＋Low-Dose FP Therapy in a Neoadjuvant Setting: Kentaro Yamaguchi, Satoru Nakagawa, Hiroshi Yabusaki and Atsushi Nashimoto (*Dept. of Surgery, Niigata Cancer Center Hospital*)

Summary

We report a 74-year-old man with advanced gastric cancer that showed a remarkable response to treatment with a combination of paclitaxel and low-dose 5-fluorouracil and cisplatin (FP) as neoadjuvant chemotherapy (NAC). The patient was admitted complaining of epigastral discomfort. Endoscopic examination revealed type 3 advanced gastric cancer with pylorus stenosis. Computed tomography (CT) revealed metastasis to group 2 lymph nodes. Staging laparoscopy was performed for accurate preoperative staging. Although peritoneal seeding was not found, peritoneal washing cytology was positive (Class V). Tumor marker of serum carcinoembryonic antigen (CEA) was elevated to 91.2 ng/m*l*. After the second course of combined chemotherapy, endoscopic examination and CT revealed marked reduction of the primary tumor and metastatic lymph nodes. Shrinkage of the primary tumor was also shown by gastrography. Distal gastrectomy with Billroth-II reconstruction was then performed. The histopathological findings showed disappearance of the carcinoma as primary lesion. Many lymph nodes whose metastatic lesions revealed a complete response, but 6 lymph nodes had remaining viable cancer cells. Paclitaxel and low-dose FP therapy are useful as NAC for advanced gastric cancer. Key words: Paclitaxel, Neoadjuvant chemotherapy, Advanced gastric cancer (*Received Dec. 27, 2005/Accepted Mar. 7, 2006*)

要旨 術前化学療法として paclitaxel を併用した low-dose FP (5-FU＋CDDP) 療法を行い原発巣が消失した症例を経験したので報告する。症例は74歳，男性。幽門狭窄を伴う3型進行胃癌で CT にて肝門部リンパ節腫大が認められ，腫瘍マーカーは CEA 91.2 ng/m*l* と高値であった。術前の staging laparoscopy では明らかな腹膜播種はないものの Douglas 窩に少量の腹水を認め，腹腔内洗浄細胞診にて Class V (CY 1) が検出された。PTX＋low-dose FP 療法の方針とし，2コース施行した。原発巣は平坦化し縮小(1方向縮小率35%)，肝門部のリンパ節も縮小し PR と判定した。副作用は軽度であり，特に治療に支障を来すような grade 2 以上の有害事象はなかった。その後，幽門側胃切除，Billroth-II法による再建を施行した。術中腹腔洗浄細胞診は陰性化し，病理組織所見では原発巣の癌組織は完全に消失し，繊維組織化しており化学療法効果は Grade 3 と判定された。58個摘出したリンパ節のうち12個のリンパ節には癌が消失したと思われる繊維化，肉芽腫形成などの所見がみられた。しかし，1群のリンパ節6個に癌組織が残存しており N1(＋) と判定された。進行胃癌に対する術前化学療法の regimen として paclitaxel＋low-dose FP 療法は有望であると考える。

はじめに

非治癒切除または非切除が予想される高度進行胃癌に対しては，強力な術前化学療法を施行し，downstaging を図ってから手術をするという考え方に基づき，neoadjuvant chemotherapy (NAC) が施行されてきた[1]。当科では現在，術前化学療法として S-1＋CDDP 併用療法を第一選択としているが，幽門狭窄などで経口摂取不可能な症例に対して paclitaxel＋low-dose 5-FU＋CDDP (以下: PTX＋FP) 併用化学療法を施行している。今回，腹腔洗浄細胞診が陰性化し原発巣が消失した PTX＋FP 療法著効症例を経験したので報告する。

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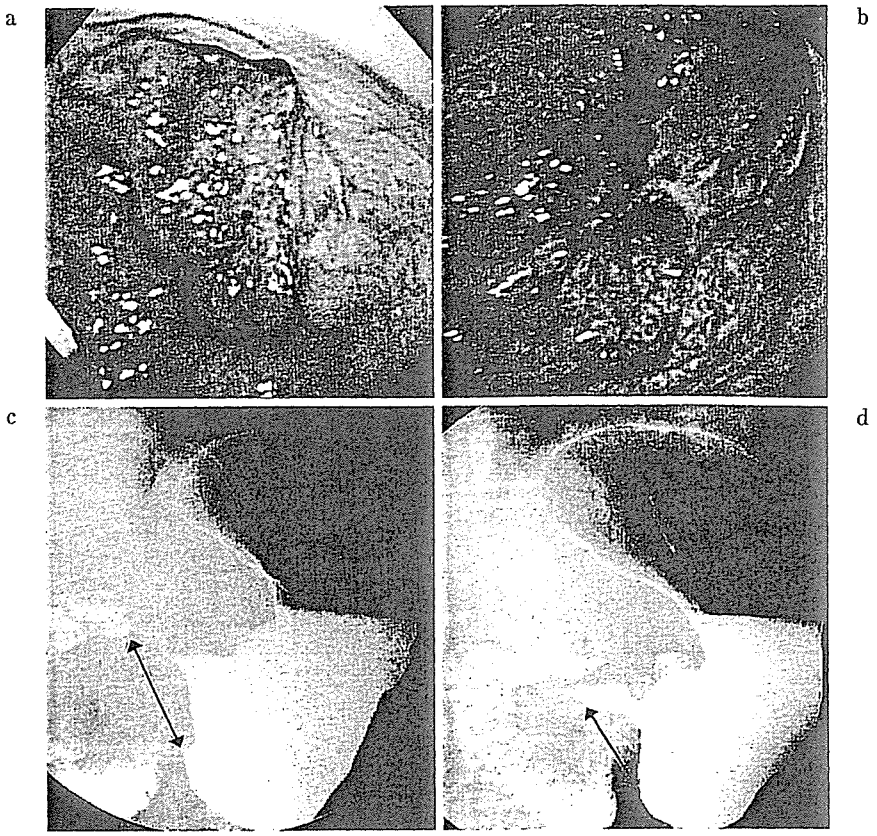

図 1 内視鏡所見，胃 X 線検査所見
a: 化学療法前の内視鏡所見，b: 化学療法後の内視鏡所見
c: 化学療法前の胃 X 線検査所見，d: 化学療法後の胃 X 線検査所見

I. 症　例

患者: 74 歳，男性。

主訴: 上腹部不快感。

既往歴，家族歴: 特記事項なし。

現病歴: 2004 年 12 月，検診（胃 X 線）にて異常を指摘された。近医での上部消化管内視鏡検査の結果，前庭部にほぼ全周性の狭窄を呈する 3 型進行胃癌が認められ，手術目的で当科紹介となった。

初診時現症: 身長 155.5 cm，体重 52.1 kg。貧血・黄疸なく，腹部に腫瘤は触知せず，Virchow，Schnitzler 転移も認めなかった。

血液生化学所見: 血算，一般生化学検査に異常なく，腫瘍マーカーは CEA が 91.2 ng/m*l* と高値であった。

胃内視鏡検査: 前庭部から幽門輪まで及ぶ全周性の 3 型胃癌で（図 1 a），生検では低分化型腺癌（por）と診断された。

胃 X 線検査: バリウムはなんとか通過するが，前庭部に全周性の狭窄を認めた（図 1 c）。

腹部 CT 検査: 原発巣の壁肥厚および肝門部リンパ節腫大を認めた（図 2 a）。

II. 経　過

術前診断の精度を向上させるため，staging laparoscopy（SL）施行。明らかな腹膜播種は認めなかったが，Douglas 窩に少量の腹水を認め，腹腔内洗浄細胞診は Class V（CY 1）であった。術前化学療法の方針とし SL 術後 5 日目より PTX＋FP 療法を開始した。投与法は PTX 40 mg/m²を day 1，8 に，CDDP 6.5 mg/m²，5-FU 350 mg/m²を day 1〜8 に静注投与，3 週間休薬とし 2 コース施行した。経過中，grade 1 の悪心・嘔吐を認めたが，grade 2 以上の有害事象は認められなかった。2 コース終了時点で胃内視鏡検査，胃 X 線検査ともに原発巣は平坦化し縮小（1 方向縮小率 35%）した（図 1 b，d 矢印）。腹部 CT にて腫大したリンパ節にも縮小化が認められ PR と判定した（図 2 b）。全身状態も良好であり幽門側胃切除＋D 2 リンパ節郭清を施行した。術中腹腔内洗浄細胞診は陰転化し，摘出標本には境界不明瞭な潰瘍瘢痕を認めた（図 3 a）。病理組織学的所見では原発巣の胃癌組織は消失し，化学療法後潰瘍のみで組織学的効果 Grade 3 と判定された（図 3 b）。摘出リンパ節 58 個のうち 12 個のリンパ節には転移が消失したと思われる繊維化，肉芽腫形成などの所見が認められた（図 3 c）。しかし，少量のリンパ節転移巣が 1 群リンパ節（6/58）に

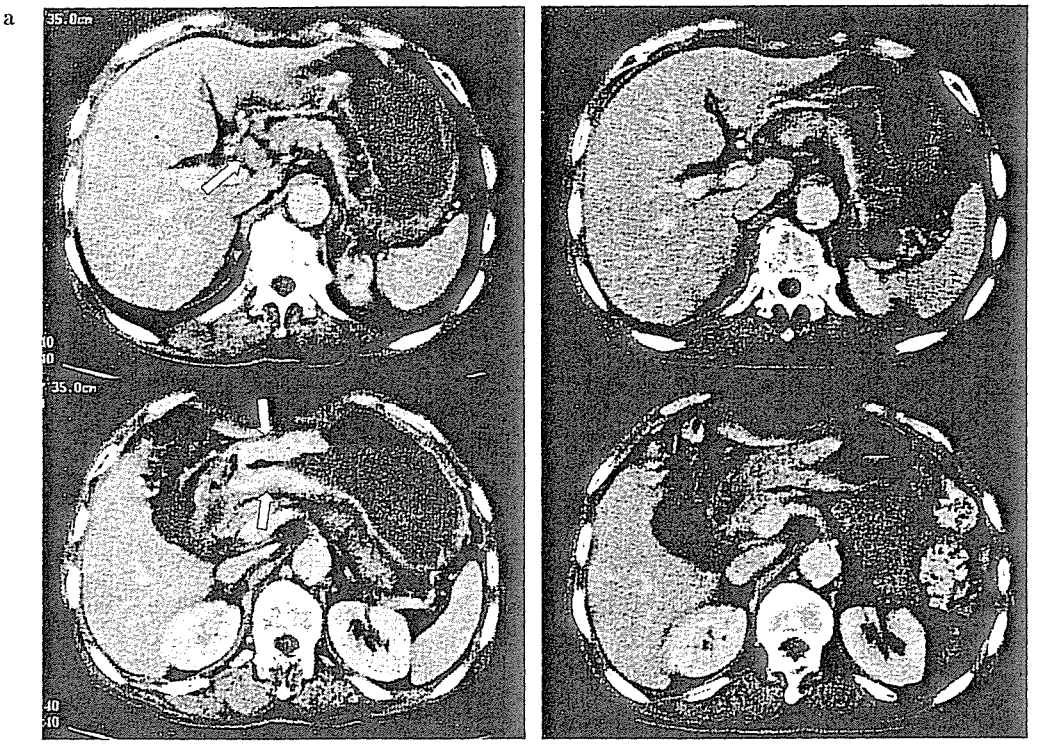

図 2　腹部 CT 検査所見
a: 化学療法前，b: 化学療法後

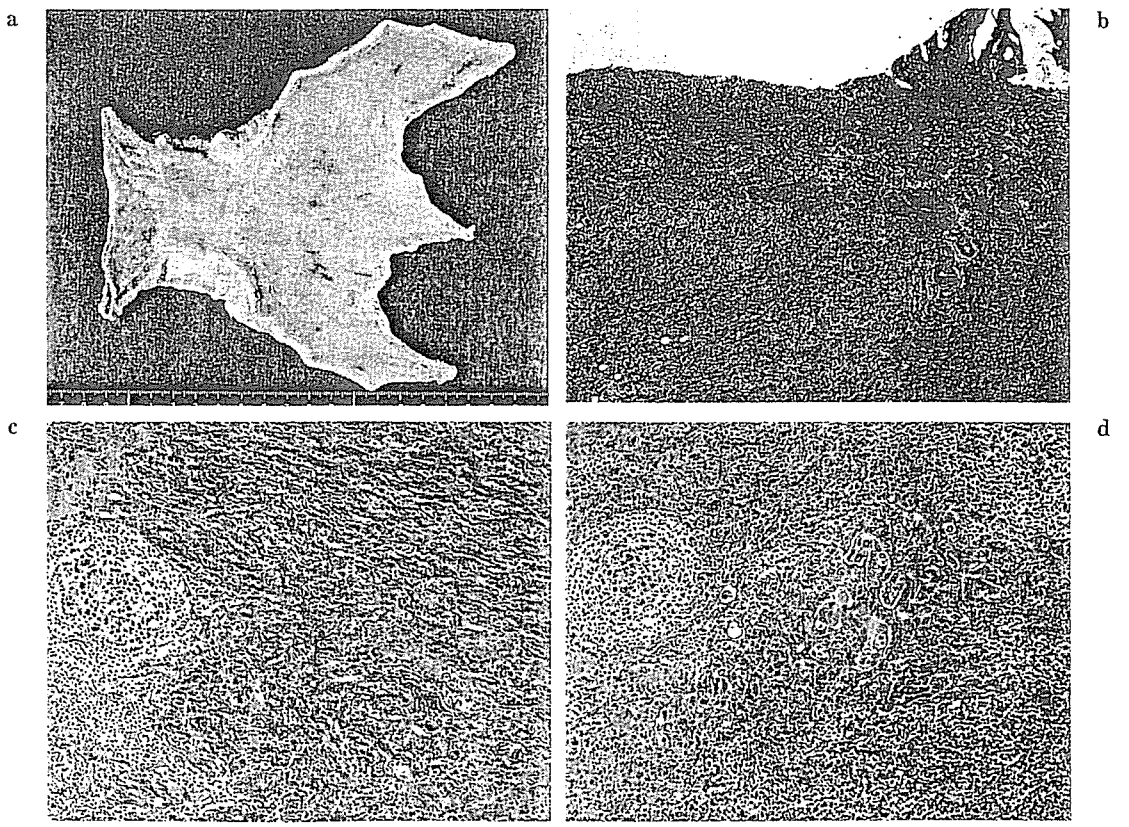

図 3　肉眼，病理組織所見
a: 切除標本
b: 原発巣×10
c: 化学療法により転移が消失したと思われるリンパ節×10
d: 化学療法により変性を認めるも癌組織が残存したリンパ節×10

残存していた（図3d）。術後経過は順調で第9病日目に退院となった。現在術後9か月経過するが特に化学療法は施行せず，外来にて経過観察中である。

III. 考　察

術前化学療法は化学療法を先行させることにより腫瘍縮小効果と微小転移への早期治療効果を期待し，その後の局所療法として外科手術により根治性を得ようとする集学的治療である[2]。現在5-FU系薬剤を用いたregimenが中心であるが，最近ではtaxane系[3]，およびCPT-11[4]などの胃癌に対する有効性を示す報告も多い。Ajaniら[5]は局所進行胃癌に対し術前5-FU＋PTX＋CDDP療法を2コース施行後，5-FU＋PTX＋放射線45 Gyを追加しD2リンパ節郭清を伴う手術を施行したところ，78%の治癒切除率，20%の組織学的CR率を認めたと報告している。当科では幽門狭窄を伴う症例や経口摂取が不可能な症例，またS-1＋CDDP療法後のsecond-lineとしてもPTX＋FP療法を使用している。当科における高度進行，再発胃癌34例（NAC症例3例含む）の検討では，全例second-line以降の使用において奏効率は23.5%であった。有害事象はgrade 3以上のものとして白血球減少8.8%，倦怠感8.8%，悪心，食欲不振を5.9%に認めたがいずれも休薬，適切な対処により改善している。このregimenは有害事象が比較的軽度で[3]，全身状態が低下した症例やsecond-lineとして使用する場合にも比較的安心して使用できる。今後は高度進行胃癌に対する治療戦略も術前化学療法にさらにシフトしていくものと思われ[6]，投与期間，手術時期に関しては症例を蓄積して検討していく必要がある。進行胃癌の術前化学療法としてPTX＋FP療法が著効した症例を経験したので報告した。

文　献

1) Nakajima T: Adjuvant chemotherapy for gastric cancer in Japan: Present status and suggestions for rational clinical trials. *Jpn J Clin Oncol* **20**: 30-42, 1990.
2) Frei IIIE: Clinical cancer research: An embattled species. *Cancer* **50**: 1979-1992, 1982.
3) 櫻井加奈子，梨本　篤，藪崎　裕: Neoadjuvant療法としてTXL＋Low-Dose FP療法が奏効した多発肝転移を伴う幽門狭窄胃癌の1例．癌と化学療法 **30**(3): 407-411, 2003.
4) 山岸由幸，秋葉保忠，泉谷幹子，他: Third-LineとしてTS-1, CPT-11併用化学療法を施行し長期生存が得られたKrukenberg腫瘍術後4型胃癌再発性癌性リンパ管症の1症例．癌と化学療法 **32**(8): 1167-1170, 2005.
5) Ajani JA, Mansfield PF, Janjan N, *et al*: Paclitaxel-based chemoradiotherapy in localized gastric carcinoma: Degree of pathologic response and not clinical parameters dictated patient outcome. *J Clin Oncol* **23**: 1237-1244, 2005.
6) 梨本　篤: 胃癌の術後補助化学療法と術前化学療法—有効性の検証—．胃と腸 **40**(7): 999-1013, 2005.

日常診療の指針

スキルス胃癌非切除の方針は妥当か？

Is Borrmann type IV gastric carcinoma a surgical disease?

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スキルス胃癌は進行癌症例の12～14%を占め[1]，漿膜浸潤，腹膜播種，高度のリンパ節転移を引き起こしやすい[2]悪性度の高い疾患である．本邦では肝転移や腹膜転移などの遠隔転移を伴わない胃癌では一般にリンパ節郭清を伴う根治的な胃切除術が行われているが，スキルス胃癌といえども，根治切除例においては20%以上の症例で5年生存が得られており，根治的な胃切除術を目指すべきであることは論を待たない．

しかしながら，以前のわれわれの検討で，スキルス胃癌症例の長期生存例は肉眼的治癒切除が得られた症例にしか認められず，細胞診陽性および肉眼的非治癒切除症例の予後はきわめて不良であり，切除例と非切除例との間に予後の差を認めなかった[3]ことから，当科では2000年以降，スキルス胃癌症例に対しては診断的腹腔鏡を導入し，腹膜転移陽性例に対しては，出血・狭窄を認める症例を除き細胞診陽性症例も含めて基本的に非切除・化学療法の方針をとってきた．

一方，近年，S-1やタキサン系新規抗癌剤の導入によりスキルス胃癌治療成績の改善がみられており，現在の化学療法剤のもとで，このスキルス胃癌非切除の方針が妥当かどうかについて定まった見解はない．そこで，当科における新規抗癌剤導入後のスキルス胃癌治療成績の変化について検討してみた．新規抗癌剤移行の過渡期の影響を除くため，新規抗癌剤導入以前の前期症例(1994年～1998年：n=95)と以後の後期症例(2000年～2003年：n=46)に分け，治療成績を検討すると，肝，腹膜等の播種性病変のない治癒切除例において，転移陽性の切除例・非切除例よりも予後良好であることは前期症例・後期症例ともに変化はないが，最近の症例では転移陽性の切除例・非切除例の双方で予後の改善が認められる一方，転移陽性の切除例と非切除例の間には，前期・後期ともに明らかな予後の差を認めなかった(図1)．当科における1999年以降のスキルス胃癌非切除症例17例の生存期間中央値は583日，最長1,301日の長期生存が得られ，2年以上の長期生存も6例認められている．また，これら17例中，原発巣の通過障害が原因で経口摂取不能となった症例は1例のみであった．

これらのデータは，診断的腹腔鏡導入による腹膜転移の診断精度の問題や，治療方針の転換に伴う切除例・非切除例の腹膜転移の程度の差など，種々のバイアスを含んでおり，本来，転移陽性のスキルス胃癌に対して切除を行うべきかどうか？という命題に対しては，正しくデザインされたランダム化比較試験を通してしか明確な結論を得ることはできないが，そのような臨床試験が行われていない現状においては，転移陽性のスキルス胃癌に対する非切除の方針も十分妥当なものであると考えている．

確かにごく少数ではあるものの，転移陽性の治癒切除例の中に長期生存例が認められるのも事実ではあるが，スキルス胃癌においてはたとえ姑息切除とはいえ，多くの場合胃全摘術が必要となり，術後のQOL低下は避けられないこと，胃全摘術後の強力な化学療法はなかなか継続が困難であることから，私見ではあるが，転移陽性スキルス胃癌症例に対す

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0433-2644/06/¥50/頁/JCLS

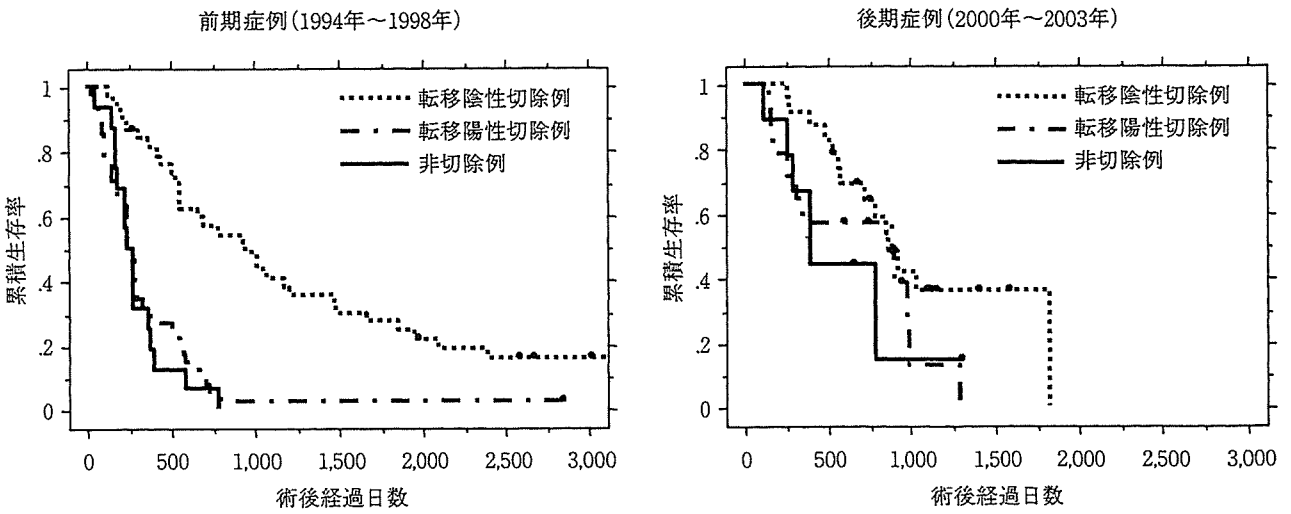

図1 スキルス胃癌治療成績の変遷

る胃切除術はハイリスク・ハイリターンの治療，非切除の方針はローリスク・ローリターンの治療といえるかもしれない．

現段階では，スキルス胃癌に対しては，注腸造影，腹部CT，診断的腹腔鏡により肝・腹膜転移の診断につとめ，転移陰性症例に対しては根治的胃切除術を選択，転移陽性例に対しては，上記の治療成績をよく説明した上で患者・家族と話し合いのうえ，治療方針を決定するようにしている．

文 献

1) Bollschweiler E, Boettcher K, Hoelscher AH, et al: Is the prognosis for Japanese and German patients with gastric cancer really different? Cancer 71: 2918-2925, 1993.
2) Kitamura K, Beppu R, Anai H, et al: Clinicopathologic study of patients with Borrmann type IV gastric carcinoma. J Surg Oncol 58: 112-117, 1995.
3) Kodera Y, Yamamura Y, Ito S, et al: Is Borrmann type IV gastric carcinoma a surgical disease? An old problem revisited with reference to the result of peritoneal washing cytology. J Surg Oncol 78: 175-181, 2001.