

Colorectal (Pelvic) Surgery

Introduction

Our clinical activities as general pelvic oncology was launched at six years ago. The main purpose of our group has been to joint divisions of urologists and general surgeons. Cooperation between two divisions contributes not only to the introduction of smooth operative technique but also oncological consensus concerning about pelvic malignancies.

The number of intrapelvic malignancies (colorectal, urogenital) is increasing year by year.

We need to establish new strategies for pelvic surgery by general surgeons (colorectal surgeons) and urologists in quite recently, new surgical procedures such as nerve- sparing surgery, pouch surgery, bladder -sparing surgery, sphincter -saving surgery, and others, have been attempting to prevent postoperative dysfunction, and good results have been obtained. It seems that new approach contributes to good quality of life for patients with pelvic malignancies.

Routine activities

- 1) Outpatient activities: The outpatient clinic of pelvic oncology is open 5 days a week and more than 300 new patients with colorectal malignancies visited last year. Other all outpatients who have been undergone curative colorectal surgery are followed up closely by their attending doctors using various diagnostic modalities to detect early recurrence. Urologic outpatient clinic is also open on Tuesday and Wednesday.
- 2) Treatment system: Our pelvic oncology group consists of 6 consultants (four general surgeons, and two urologists) and five to six residents, and carries out eight to ten operations a week under general anesthesia. We have two conferences a week for GI malignancies; (1) image diagnosis conference with radiologists and endoscopists on Monday, (2) case conference on Wednesday or Thursday that we make therapeutic decisions on all new cases with GI malignancies through discussion with medical oncologists, endoscopists and surgeons. The surgical pathology conference is held monthly with attending surgeons and pathologists. Concerning the intrapelvic

malignancies, we are also consulting with urologists (consultants and part-time) for each time.

- 3) Treatment modalities: In early cancer cases, many modalities have been introduced such as endoscopic resection, local excision, or TEM (transanal endoscopic microsurgery). In addition, the laparoscopy assisted operation (Lap-Op) was introduced in 1994 and has since been used as a minimally invasive surgical technique. Patients with early cancer with submucosal invasion diagnosed histologically after endoscopic resection or those who have unresectable metastatic lesions were indicated for Lap-Op in our hospital till December 1997. Since January 1998 we have acquired a technique of wider lymphnodes dissection up to more than D2, so the indication of Lap-Op has been expanding (see research activities).
- 4) ISR (internal sphincteric resection): This new procedure permits partial sphincter preservation with good oncologic results rectal cancer. We have already experienced more than 100 patients since the first case was done at 6 years ago. The candidates of this modality are patients with rectal cancer suited less than 3cm from dentate line. Neoadjuvant therapy (preoperative radio chemotherapy) have been also added in this pilot study. The rate of Miles operation in the patients with lower rectal cancers were extremely decreased in our hospital as result (from 30% to 4%).

Research Activities

- 1) Prospective non-randomized trial for the extension of the indication for Lap-Op: The criteria of inclusion for this trial are 1. Within 5cm in diameter of tumor, 2. No mass over 7mm in diameter around the main tumor in CT image, 3. Excluding poorly differentiated adenocarcinoma. These criteria established based on preoperative information. Disease free survival and overall survival at three years of Lap-Op was same as these of ordinary surgery in all stages. From January 2002, the indication for Lap-Op is extended to almost all patients with colonic cancer except patients with direct invasion to the other organs. About 60% of

operable colon cancer was resected by Lap-Op in this year. Moreover we have a planning to extend the indication of Lap-Op to the patients with T1 and T2 rectal cancer suited below the peritoneal reflection.

- 2) The extension of indication of natural anus preservation operation for extremely distal rectal cancer: This trial is started using intersphincteric resection (ISR) and partial external sphincteric resection (PESR), or local excision of tumor combined with preoperative or postoperative chemo-radiotherapy. The purpose of this trial is to make and establish new other technique instead of rectal amputation for the patients with extremely distal rectal cancer. The construction of a non-stimulated gracilis neoanal sphincter is also made a plan for the rectal cancer patients with a poor postoperative anal function or for the patients undergoing abdominoperineal resection (APR).
- 3) Evaluation of the dysfunction after surgery of patients with intrapelvic malignancies: The objective evaluation for damage of functions caused by intrapelvic autonomic nerve injury after

operations is difficult. There are many methods, but stable data has not been available. To evaluate the efficacy of objective measurement for urinary or sexual functions, we started to accumulate objective and subjective data prospectively in patients receiving pelvic surgery.

- 4) Novel urinary bladder sparing surgery for patients with advanced rectal carcinomas involving prostate, seminal vesicle, or both. Total pelvic exenteration (TPE) had been believed to be the best surgical procedure for patients with those malignance. As a results, patients required urinary and/or fecal diversion and QOL was decreased. To avoid TPE, we performed en bloc removal of rectum with prostate and seminal vesicle in selected patients using ISR or APR (abdominoperineal resection) with radical prostatectomy. This new approach has been done in eleven patients, and those patients's QOL seems to be improved in urination and/or evacuation.

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Number of Operative Cases in Colorectal Surgery Group in 2001-2005

Year	Total number	Colorectal cases			Stomachcases	ro.cases	others
		Colon	Rectum	Total			
2001	423	103	93	196	57	111	59
2002	402	117	124	241	84	21	56
2003	417	129	111	240	69	29	79
2004	480	161	122	283	32	76	89
2005	449	138	125	263	14	106	66
SUM	2,171	648	575	1,223	256	343	349

Survival rate for each stage (Kaplan-meier method %)

	1year	2year	3year	4year	5year
Stage I	99	99	97	97	97
II	98	96	92	92	88
III a	95	91	91	91	83
III b	84	73	73	47	47
IV	64	38	38	25	15