

Colorectal (Pelvic) Surgery

Introduction

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

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

We need to establish the new strategy for pelvic surgery by general surgeons (colorectal surgeons) and urologists in our division. 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 obtaining. It seems that new approach contribute 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 then 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 own 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 as 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 ceases 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 the technique of wider lymphnodes dissection up to more than D2, so the indication of Lap-Op has been extending (see research activities).
- 4) ISR (internal sphincteric resection): This new procedure permits partial sphincter preservation with good oncologic results in distal rectal cancer. We have already experienced nearly 70 cases since the first case was done at 5 years ago. The candidates of this modality are the patients with rectal cancer suited less than 3cm from dentate line. Neoadjuvant therapy (preoperative radio chemotherapy) have also been added in this pilot study. The rate of Miles operation in the patients with lower rectal cancers were extremely decreased from 30% to 4% in our hospital.

Research Activities

- 1) Prospective none-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 essentially 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 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) or local excision of tumor combined with preoperative or postoperative chemoradiotherapy. The purpose of this trial is to make and establish new other menu except rectal amputation for the patients with extremely distal rectal cancer.
- 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.

- 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 impaired. 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 eight patients, and those patients's QOL was improved in urination and/or evacuation.

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Number of Operative Cases in Colorectal Surgery Group in 2000-2004

Year	Colorectal cases						
	Total number	Colon	Rectum	Total	Stomachcases	ro.cases	others
2000	451	91	95	186	90	101	74
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
SUM	2,173	601	545	1,146	332	338	357

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

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