

Primary malignant tumors of the small intestine

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ABSTRACT: From 1967 through 1987, 43 of primary malignant tumors of the small intestine were experienced at the First Department of Surgery, Nagasaki University Hospital and affiliated hospital, and clinically analysed.

- 1) Carcinoma, leiomyosarcoma and malignant lymphoma occupied one third in number. The preferable location of carcinomas and malignant lymphomas was lower part of the small bowel although that of leiomyosarcoma was upper part.
- 2) Diagnosis was mainly made by means of laparotomy which was carried out by clinical signs of obstruction or peritonitis. poor prognosis attributed to extension of a disease to nodes and liver. An early and accurate diagnosis of small bowel tumors is necessary for improving the survival rate.

INTRODUCTION

Primary tumors of the small intestine are very rare in frequency as reported to be 3-6% of gastrointestinal neoplasma¹⁾ and also about 1.5-5% of all gastrointestinal malignant tumors. Sixty and 75% of these are malignant, although it corresponds to approximately 1% of malignant tumors.²⁾³⁾

Because of the infrequency and non-specific symptoms of small bowel tumors, improved management can hardly be achieved.

The present study analyzes the experience with 43 malignant small bowel tumors at the First Dept. of Surgery, Nagasaki University School of Medicine and its affiliated hospitals.

MATERIAL AND RESULTS

Forty-three malignant tumors constituted 24 carcinomas, 30 leiomyosarcomas and 32 malignant lymphomas. Periapillary neoplasmas and those of ileocecal valve were excluded from this study. There were 25 males and 18 females.

The age of patients ranged from 18 to 79 years (mean 52.6), averaging 63.7 years in carcinomas, 58.7 in leiomyosarcomas and 53.8 in malignant lymphomas as shown in Fig 1. Almost half of carcinomas were localized in the lower portion of the small bowel and one third in lower part. Sixty-seven per cent of leiomyosarcomas were situated in the upper portion. On the contrary, ninety-four per cent of malignant lymphomas were localized in the

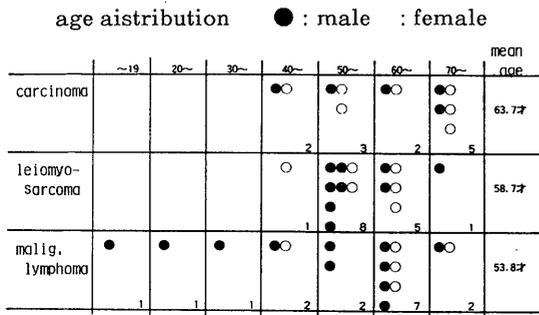


Fig. 1. Sex & Age distribution in 43 primary malignant small bowel tumors

lower part with the individual preferential location.

Abdominal pain, anemia and abdominal mass were the most common symptoms, other symptoms were ileus, weight loss, melena and perforation. Non-specific symptoms of abdominal pain and anemia were common.

The diagnosis preoperatively made was shown in Table 1. Obstruction with unknown origin and abdominal neoplasms were of diagnostic importance when the sign of the intestinal obstruction was manifest and abdominal mass was palpated. Abdominal pain, ileus, anemia and palpation of abdominal mass were common in frequency of clinical signs in malignant neoplasms including carcinomas, leiomyomas and malignant lymphomas as shown in Table 1.

Table 1. Tumor location in 43 primary malignant tumors of the small bowel

location	carcinoma	leiomyo-sarcoma	malig. lymphoma	total
upper	2 (16.7)	10(66.7)	1 (6.3)	13(30.2)
middle	4 (33.3)	3 (20.0)	0	7 (16.3)
lower	6 (50.0)	2 (13.3)	15(93.8)	23(53.5)
total	12(100%)	15(100%)	16(100%)	43(100%)

The most valuable means to detect was barium enema, CT scan and ultrasonography. These were of benefit to exclude a pancreatic origin of the neoplasm and to evaluate the locoregional diffusion.

Resection was performed in all patients. In the two out of 12 carcinomas, one had hepatic metastasis and the other had peritoneal dissem-

ination accompanying perforation with hepatic metastasis. In the two out of seven malignant lymphosarcoma, involvement of the abdominal wall was seen in either case.

In leiomyosarcoma, there were hepatic metastasis in one and peritoneal dissemination in another one, respectively.

Operative mortality was 6.9% (3 patients died within 30 days after surgery among the 24 cases). Positive nodes were found in 12 patients resected for malignancy. Ten of whom was carcinoma. The survival of the 24 patients has been analysed as shown in Table 2.

Table 2. Clinical signs in 43 primary malignancy of the small intestine

	carcinoma	leiomyo-sarcoma	malig. lymphoma	total
abd. pain	41.7%(5/12)	46.7%(7/15)	81.3%(13/16)	58.1%(25/43)
ileus	58.3 (7/12)	20.0 (3/15)	37.5 (6/16)	37.2 (16/43)
abd. mass	50.0 (6/12)	50.0 (7/14)	63.6 (7/11)	54.1 (20/37)
anemia	66.7 (8/12)	53.3 (8/15)	56.3 (9/16)	58.1 (25/43)
melena	16.7 (2/12)	6.7 (1/15)	18.8 (3/16)	14.0 (6/43)
weight loss	25.0 (3/12)	6.7 (1/15)	18.8 (3/16)	16.3 (7/43)
perforation	0 (0/12)	20.0 (3/15)	6.3 (1/16)	9.3 (4/43)

The survival in those who have carcinomas and malignant lymphomas could not extend after surgery as would be expected. (Fig. 2) It was based on the advancing disease stages involving the nodes and peritoneal infiltration, and metastasizing into the liver.

Poor prognosis was shown as death within two years following surgery. The patients who survived over two years after surgery. with respect to histological type, a most detrimental outcome was shown in poorly differentiated carcinoma and diffuse lymphoblastic cell type of malignant lymphoma. Whenever the survival extended up to five years, the longer survivor should be expected.

DISCUSSION

It is very rare to have a chance to treat tumors of the small intestine.⁴⁾ It has been proposed that exposure of any potent carcinogen to the mucosa is transient on account of rapid transit of small bowel contents.⁵⁾

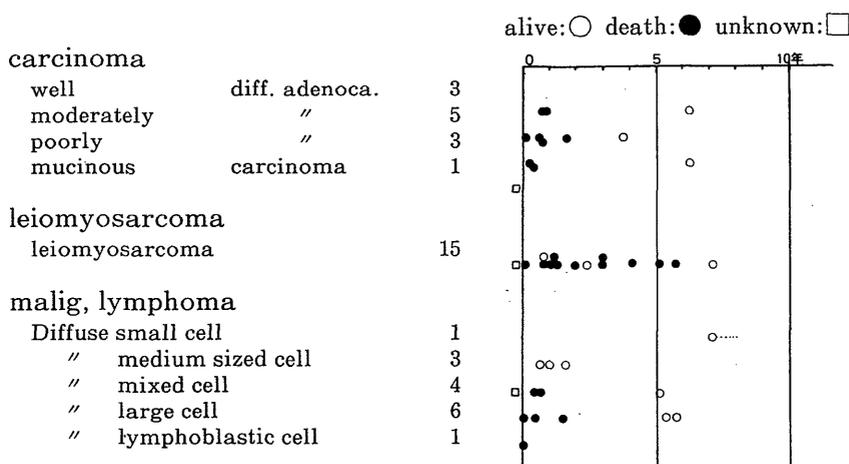


Fig. 2. Relationship between histologic types and surgical outcome.

Improved management can not be achieved by less experience with diagnosis and treatment. Furthermore, the non-specific symptoms of small bowel tumors delay diagnosis and make it impossible to curatively treat.

Radiological examination of the gastrointestinal tract is useful for diagnosis in a limited number of cases.²⁾⁶⁾ Needless to say, early detection by barium study is infrequently achieved, so are ultrasonography and CT scan attempted in combination.

Both sometimes help to ascertain the site and the spread of a tumor. In general, many surgeons tend to point out poor survival rate among patients with longer duration of symptoms.^{6)~8)} In this series a tumor was spreading into the adjacent organ, nodes and the liver in 57.2% of malignant lymphosarcomas, in 83.4% of carcinoma and in 33.3% of leiomyosarcoma. Survival is correlated with the histologic type of malignant neoplasia in some extent. However, it is natural to expect that those who survive over two years following surgery should be a long survivors. Clinical symptoms such as obstruction and abdominal mass, which are a diagnostic clue imply already far advancing disease. On the consequence, an early and accurate diagnosis of small bowel tumors is needed for improvement of surgical outcome. In patients undergoing resection for malignant neoplasms, survival is related to histological type and extension of a tumor.

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