

มะเร็งลำไส้ใหญ่ในผู้ป่วยอายุน้อยกว่า 40 ปี

พจนันท์ อภินิวศ, วัชรพงศ์ พุทธิสวัสดิ์, ขจิตร์ พาชีรัตน์, ไชยยุทธ ธนไพศาล, โอวดีอ แซ่เซียว, ดำเนิน วชิโรดม
ภาควิชาศัลยศาสตร์ คณะแพทยศาสตร์ มหาวิทยาลัยขอนแก่น

Colorectal Cancer in Patients Under 40 Years of Age

Aphinives P, Bhudhisawasdi V, Pacheerat K, Tanapaisal C, Sae-Seow O, Vajirodom D
Department of Surgery, Faculty of Medicine, Khon Kaen University

Objective : To identify the presentation and outcome of patients under 40 years of age compared to those over 40.

Design : Retrospective, descriptive study.

Setting : Department of Surgery, Srinagarind Hospital, Faculty of Medicine, Khon Kaen University.

Subjects : All patients who underwent colorectal cancer surgery between January 1993 and December 1997.

Data collection : By a review of medical records, endoscopic notes, radiographic reports, operative notes and pathological reports.

Measurement : Descriptive statistics, χ^2 -test and the Kaplan-Meier survival techniques.

Results : Patients under 40 years old constituted ~10% (13) of the 136 patients operated on for primary colorectal cancer. Common presentations in both groups were: a

change in bowel habits, detection of anemia or an abdominal mass, and loss of weight. However, the incidence of abdominal masses in Group Y (age < 40 years) was significantly higher than Group O (age \geq 40 years). The proportion of Duke's Stage A, B, C and D lesions in Group Y was 15.4%, 15.4%, 38.5% and 30.8% respectively versus 4.9%, 28.5%, 35.8% and 30.9% in Group O. The incidence of mucinous/signet ring cell and poor grade tumors was 15.4% and 15.4%, respectively, in Group Y and 1.6% and 8.1% in Group O. The overall 5-year survival rates were 28.1% in Group Y and 30.4% in Group O.

Conclusions : This study revealed no difference in the presenting symptoms nor the stage at presentation though tumor characteristics and survival of the younger adults looked poorer than the older group, differences were not statistically significant.

ศรินครินทร์เวชสาร 2543; 15(4), 241-243 • Srinagarind Med J 2000; 15(4), 241-243

Although cancer of the colon and rectum occurs predominantly in older adults, it does affect younger adults with an incidence varying between 2 and 23%¹⁻²⁰. The behavior, characteristics and prognosis of colorectal cancer in young adults can be compared with the same condition in older patients.

Numerous studies report an unfavorable prognosis of this disease when it occurs in young adults^{8-9,11-13,17-18} which is usually attributed to a more advanced stage at presentation; because of delayed diagnosis¹⁰. In young adults, the more frequent occurrence of poorly differentiated and mucinous/signet ring tumor cells serve as a specific tumor histologic feature which may more accurately explain the poorer outcome.

Our study was undertaken to determine the incidence of colorectal cancer in young adults compared with the same type of cancer in older patients. The clinical characteristics noted were: frequency of aggressive

histologic-tumor features, the stage at presentation, and their impact on patient survival.

Patients and methods

Data were collected from the case records of 136 consecutive patients who underwent colorectal cancer surgery at Srinagarind Hospital, Faculty of Medicine, Khon Kaen University between January 1993 and December 1997. Follow-up data on patients, who received a minimum follow-up of 24 months, were reviewed from the outpatient records. Data were complete for most of the patients but contact was lost with ten of them during the follow-up phase.

Patients under 40 years were classed Group Y and those 40 and older were Group O. Demographic features, disease stage, tumor characteristics and survival were compared between the two groups.

Definitions

Staging was based on the depth of the tumor, its penetration, location and extent of spread. Tumors were staged according to the modified Duke's classification system (Turnbull, 1967): **Stage A**, not beyond the *muscularis propria*; **Stage B**, beyond the *muscularis propria*; **Stage C**, regional lymph nodes involved; and, **Stage D**, distant metastasis.

Statistical methods

Statistical analyses were done using Statistica for Windows 5.0 (StatSoft Inc, Tulsa, OK, USA). The variables were compared using the χ^2 -test. Kaplan-Meier survival techniques were used to estimate the percentage of patients undergoing surgery who would survive 2 and 5 years.

Results

Group Y patients with colorectal cancer represented 13 patients (9.6%) of the 136 patients operated on for primary colorectal cancer: 5 (38.5%) were female and 8 male. Group O had 53 (43.1%) women and 70 men. The median age of all patients with colorectal cancer was 58 years ranging from 17 to 94. In Group Y, the median age was 35 (range 17 to 39). The symptoms of the two groups of patients were not significantly different except that abdominal masses were more prevalent in Group Y (Table 1).

Table 1 Presenting symptoms

Symptoms	Group Y (%)	Group O (%)	p-value
Change in bowel habits	6 (46.2)	71 (57.7)	0.42
Anemia	2 (15.3)	25 (20.3)	0.67
Abdominal mass	5 (38.5)	17 (13.8)	0.02*
Weight loss	3 (23.1)	19 (15.5)	0.48
Abdominal pain	1 (7.7)	9 (7.3)	0.96
Gut obstruction	1 (7.7)	8 (6.5)	0.98
Total	13 (100)	123 (100)	-

*Statistical significant

There was no statistical difference in the tumor sites between Groups Y and O. The most common sites for cancer were the rectum and the sigmoid colon. No significant difference was found between Groups Y and O in the staging at presentation (Table 2). The sole tumor type found was adenocarcinoma. Analysis of tumor differentiation in the two groups did not reveal any significant difference except that more aggressive mucinous and signet ring adenocarcinomas were more prevalent in Group Y (Table 3). There was no difference in the 2- and 5-year survival rates between the two Groups (Table 4).

Table 2 Comparison of Duke's stage at presentation

Duke's stage	Group Y (%)	Group O (%)	p-value
A	2 (15.4)	6 (4.9)	0.13
B	2 (15.4)	35 (28.5)	0.30
C	5 (38.5)	44 (35.8)	0.85
D	4 (30.8)	38 (30.9)	0.99
Total	13 (100)	123 (100)	-

Table 3 Comparison of pathological findings

Tumor differentiation	Group Y (%)	Group O (%)	p-value
Well differentiated	8 (61.5)	98 (79.7)	0.14
Moderate	1 (7.7)	13 (10.6)	0.75
Poor	2 (15.4)	10 (8.1)	0.38
Mucinous/signet ring	2 (15.4)	2 (1.6)	0.006*
Total	13 (100)	123 (100)	-

* Statistical significant

Table 4 Survival following colorectal cancer surgery

Survival	Group Y		Group O		p-value
	N	%	N	%	
2-year	13	49.84 (±13.83)	123	54.68 (±4.70)	0.73
5-year	13	28.08 (±14.40)	113	30.44 (±5.32)	0.86

Values in parentheses are 95% confidence intervals

Discussion

In Thailand, colorectal cancer is the third most common cancer in men after liver and lung cancers and fifth in women after cancers of the cervix, breast, liver and lung²¹. Inherent to the discussion is the possible explanation for the unfavorable prognosis of young adults with colorectal cancer. Larger studies^{2,12} identified a greater proportion of poor prognostic tumor variables, such as mucinous or signet ring cell and poor grade tumors, in young adults. Several investigators contend that the late diagnosis might be attributable to low vigilance^{13,22}, but this is disputed because the duration of symptoms may not predict survival from diagnosis^{1,20} since more aggressive tumors have a lead-time bias^{7,23}. The presenting complaints of colorectal malignancy in young

and old adults are alike, but abdominal masses occur in a significantly higher percentage in the young^{2,13,24}.

The Duke's Stage was the most common reproducible independent variable affecting prognosis. In most studies, younger adults had more advanced tumors at presentation, however, the distribution of stage at presentation in our study was similar between the two age groupings. There was no difference in the overall 2- and 5-year survival rates.

Conclusions

The results of our analysis indicate that patients under 40 years of age with colorectal cancer had presenting symptoms and a Duke's Stage at presentation similar to those of older patients. However, younger adults had poorer tumor characteristics than the older ones, yet the outcomes were similar. This study did not confirm a poorer prognosis for younger adults diagnosed with colorectal cancer.

Acknowledgments

The authors thank Mr. Bryan Roderick Hamman for assistance with the English-language presentation of the paper.

References

1. Sanfepippo PM, Beahrs OH. Carcinoma of the colon in patients under forty years of age. *Surg Gynecol Obstet* 1974; 138: 169-70.
2. Howard EW, Cavallo C, Hovey LM, et al. Colon and rectal cancer in the young adult. *Am Surg* 1975; 41: 260-5.
3. Bulow S. Colorectal cancer in patients less than 40 years of age in Denmark, 1943-1967. *Dis Colon Rectum* 1980; 23: 327-36.
4. Safford KL, Spebar MJ, Rosenthal D. Review of colorectal cancer in patients under age 40 years. *Am J Surg* 1981; 142: 767-9.
5. Ohman U. Colorectal carcinoma in patients less than 40 years of age. *Dis Colon Rectum* 1982; 25: 209-14.
6. Jarvinen HJ, Turunen MJ. Colorectal carcinoma before 40 years of age: prognosis and predisposing conditions. *Scand J Gastroenterol* 1984; 19: 634-8.
7. Umpleby HC, Williamson RCN. Carcinoma of the large bowel in the first four decades. *Br J Surg* 1984; 71: 272-7.
8. Wong SKC, Cheung PSY, Boey J, et al. Colorectal carcinoma in the young. *Aust N Z J Surg* 1985; 55: 149-52.
9. Behbehani A, Sakwa M, Ehrlichman R, et al. Colorectal carcinoma in patients under age 40. *Ann Surg* 1985; 202: 610-4.
10. Adloff M, Arnaud JP, Schloegel M, et al. Colorectal cancer in patients under 40 years of age. *Dis Colon Rectum* 1986; 29: 322-5.
11. Okuno M, Ikehara T, Nagayama M, et al. Colorectal carcinoma in young adults. *Am J Surg* 1987; 154: 264-8.
12. Domergue J, Ismail M, Astre C, et al. Colorectal carcinoma in patients younger than 40 years of age. Montpellier Cancer Institute experience with 78 patients. *Cancer* 1988; 61: 835-40.
13. Smith C, Butler JA. Colorectal cancer in patients younger than 40 years of age. *Dis Colon Rectum* 1989; 32: 843-6.
14. Barillari P, Ramacciato G, Valabrega S, et al. Colorectal cancer in young patients. *Int Surg* 1989; 74: 240-3.
15. Isbister WH, Fraser J. Large-bowel cancer in the young: a national survival study. *Dis Colon Rectum* 1990; 33: 363-6.
16. Griffin PM, Liff JM, Greenberg RS, et al. Adeno-carcinomas of the colon and rectum in persons under 40 years old. A population-based study. *Gastroenterology* 1991; 100: 1033-40.
17. Isbister WH. Colorectal cancer below age 40 in the Kingdom of Saudi Arabia. *Aust N Z J Surg* 1992; 62: 468-72.
18. Molnar L, Koves I, Besznyak I. Malignant colorectal tumours in young adults. *Acta Chir Hung* 1994; 34: 133-8.
19. Lee PY, Fletcher WS, Sullivan ES, et al. Colorectal cancer in young patients: characteristics and outcome. *Am Surg* 1994; 60: 607-12.
20. Cusack JC, Giacco GG, Cleary K, et al. Survival factors in 186 patients younger than 40 years old with colorectal adenocarcinoma. *J Am Coll Surg* 1996; 183: 105-12.
21. Martin N, Chindavijak K, Khuhaprema T. In: Deerasamee S, Martin N, Sontipong S, ed. *Cancer in Thailand, 1992-1994*. IARC Press. Lyon. 1999: 41-4.
22. Pitluk H, Poticha SM. Carcinoma of the colon and rectum in patients less than 40 years of age. *Surg Gynecol Obstet* 1983; 157: 335-7.
23. Copeland EM, Miller LD, Jones RS. Prognostic factors in carcinoma of the colon and rectum. *Am J Surg* 1968; 116: 875-81.
24. McGahren ED III, Mills SE, Wilhelm MC. Colorectal carcinoma in patients 30 years of age and younger. *Am Surg* 1995; 61: 78-82.

