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Research Article

Evaluating the Frequency of Outpatient Visits of Cancer Patients during the Remission Period

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Keywords

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Abstract

Introduction: Guidelines provide us with supportive information about the frequency of clinic visits among cancer patients in remission. The aim of our study was to explore this parameter in our hospital.

Materials and Methods: We recruited breast, colon, and gastric cancer patients who had been treated between January 2005 and January 2010 in our clinic. The population data were extracted in a retrospective manner and included the demographics, date of diagnosis, stages of TNM, treatment modalities, and outpatient follow-up dates. Patients with distant metastasis and who could not achieve remission after surgery, or who developed complications, were excluded from the study. We recorded the number of outpatient visits following surgery in patients in remission during a 5-year follow-up period and considered the interval afterwards in cases of relapse.

Results: A total of 319 patients were enrolled in the study [23% were male (n=75), and 77% were female (n=244)]. Adjuvant chemotherapy appeared to be an independent factor that affected the frequency of outpatient visits ($p=0.001$) in the first year of follow up. Age, gender, education status, the tumor grade, type of surgery, colostomy, or port had no effect on the frequency of outpatient visits at the second year of follow up. It can be said that more of patients were compliant with the proposed visit intervals throughout the 5-year study period, excluding the first year, due to the chemotherapy regimen.

INTRODUCTION

After completing primary treatment, it is standard practice in most countries for cancer patients to be followed in specialist outpatient clinics during the disease-free interval. Reduced follow-up strategies did not negatively affect patient-reported outcomes or the early detection of recurrence. However, in terms of a cost–benefit analysis that compared standard clinical follow up with more intensive follow up, plus additional imaging and laboratory tests, it was concluded that more intensive follow up was associated with higher costs without differences in the early detection of relapses [1,2]. Although the recommendations are based to apply for standart practice for disease-free interval, many medical, sociocultural or psychological factors are taken into consideration so those may alter visit interval. To knowledge whether the visit interval applied according to schedule and many factors altered visit interval may provide benefit of the improvement follow-up. In this study, we aim to determine the frequency of visits during disease-free interval and the factors effected on patient's compliance in our outpatients clinic retrospectively.

MATERIALS AND METHODS

Breast, colon and gastric cancer patients received standart theraphy and regularly followed-up between years of 1995-2012 were included in the study. Demagraphic data, TNM stages at the diagnosis, treatment medical and surgical protocol and clinical status after the primary treatment were obtained from medical records. Standart therapies were defined as curative surgery, adjuvant chemotheraphy [Cyclophosphamide (Cyc), epirubicine and 5-Fluorouracil (5-FU) or Cyc and Doxorubicine] if required, adjuvant radiotheraphy for breast cancer, curative surgery, adjuvant chemotheraphy [5-FU and calcium leucovorine (CL) or oxaliplatine, 5-FU and CL] if required for colon cancer

and curative surgery, adjuvant chemotheraphy (5-FU and CL) if required, adjuvant radiotheraphy gastric cancer.

Additionally colostomy and port for chemotheraphy was recorded. In order to eliminate bias, we determined the exclusion criteria for certain groups of patients. Individuals with distant metastasis, or comorbidities and were not enrolled, as their treatment or consultation requirements may have caused different outcomes. On the other hand, patients who could not achieve remission after surgery or who developed complications were also excluded from the study due to the same reasons. We detected the number of outpatient visits following surgery in patients with remission for a 5-year follow-up period. National Comprehensive Cancer Network (NCCN) recommends 2-4 visits per year in the disease-free period after primary treatment for each cancer type. Patients were invited for their medical visits with regard to NCCN recommendation in this period and they were grouped according to number of visit per year. The data were analyzed with the SPSS version 16.0 software program.

RESULTS

A total of 319 patients were enrolled in the study [23% were male (n=75) and 77% were female (n=244)]. The mean age of the patients was 38.6±28.4 years, but when we segmented them according to the type of cancer, the oldest patients were noted in the colon cancer group (54.7±13.8 years), followed by gastric cancer patients (45.1±27.5 years) and breast cancer patients (37.4±26.6 years). The relapse rate was calculated anytime during the 5-year follow-up period; however, this did not yield any statistical significance. Age, gender, education status, the tumor grade, type of surgery, colostomy, or port had no effect on the frequency of outpatient visits at the second year of follow up. The port openings were only prominent in the colon cancer group (n=20; 21%), and there was only one in the gastric cancer group (n=1; 3%).

The average visit frequency of the patients was 4.5 visits annually. However, this rate dropped to 2.3 in the second year, and was more or less the same for the five years of our analysis (the details are shown in Table 1).

Of the 183 patients with breast cancer, 83 of them had >4 visits/year, but this rate dramatically decreased to 10 patients in the second year, and 3 in the third year. 79 of 183 patients had 2–4 visits in the first year, while 132 patients in the second year, 106 in the third year, 57 in the fourth year, and 40 in the fifth year had 2–4 visits annually. The category of <2 visits/year was apparently compliant with the course of the disease. Only 7 subjects had fewer than 2 visits in the first year; however, this rate increased to 27 subjects in the fourth year and 29 subjects in the fifth year (Table 2).

Of the 96 patients with colon cancer, 31 had >4 visits/year, but this dramatically decreased to 2 patients in the second year and 1 in the third year. However 2–4 visits/year had more promising results: 51 of 96 subjects visited the clinic 2–4 times in the first year, 59 in the second year, 34 in the third year, 17 in the fourth

Table 1: The clinical characteristics of the patients.

	Breast (%) n=183	Colon (%) n=96	Gastric (%) n=36	Total (%) n=319
Age	37.4±26.6	54.7±13.8	45.1±27.5	38.6±28.4
Gender				
Female	182 (99.5)	46 (48)	13 (36)	241 (76)
Male	1 (0.5)	50 (52)	23 (64)	74 (24)
Colostomy	.	19 (20)	.	19 (6)
Port	0	20 (21)	1 (3)	21 (7)
Adjuvant Chemotx	151 (82)	75 (78)	28 (78)	254 (80)
Relapse*	21 (12)	25 (26)	12 (33)	58 (81)
Mean visits				
Year 1	4.6	4.0	4.0	4.5
Year 2	3.0	2.8	3.2	2.3
Year 3	2.3	2.2	1.8	2.6
Year 4	1.8	2.3	2.0	1.5
Year 5	1.6	2.6	1.0	2.0

*Anytime during the 5-year follow-up period.

Table 2: Annual outpatient visits of follow-up patients when segmented according to diagnosis.

	>4 visits				2–4 visits				<2 visits			
	Breast	Colon	Gastric	N	Breast	Colon	Gastric	N	Breast	Colon	Gastric	N
Year 1	83	31	8	122	79	51	17	147	7	4	2	13
Year 2	10	2	1	13	132	59	14	205	12	2	1	15
Year 3	3	1	0	4	106	34	6	146	16	4	5	25
Year 4	1	0	0	1	57	17	5	79	27	2	2	31
Year 5	0	0	0	0	40	8	0	48	29	0	3	32

year, and 8 in the fifth year. The category of <2 visits/year was associated with the lowest numbers of patients. Only 4 subjects had fewer than 2 visits in the first year, and this proceeded to plateau throughout the course of follow up (Table 2).

Patients with gastric cancer exhibited a different visit frequency pattern when compared to the breast and colon cancer groups, but the relatively low numbers of subjects did not allow us to make any significant predictions regarding this effect. Of the 36 patients with gastric cancer, 8 of them had >4 visits/year, but this dramatically decreased to 1 patient in the second year and none in the following years. Moreover, there were 17 of 36 patients who had 2–4 visits/year in the first year, 14 patients in the second year, 6 patients in the third year, 5 patients in the fourth year, and 0 patients in the fifth year. Patients with fewer than 2 visits/year were very rare. Only 2 subjects had less than 2 visits in the first year, and this progressed in the same pattern during the five-year period.

While age, gender, type of cancer, colostomy and port were not associated with the number of visits, adjuvant chemotherapy appeared to be an independent factor that affected the frequency of outpatient visits (p=0.001) in the first year of follow up.

DISCUSSION

Cancer treatment requires a multidisciplinary approach and a scheduled follow-up visit [3]. After completion of the primary treatment for cancer, it is standard practice for follow up to be provided in specialist surgical or oncology clinics. Follow-up visits usually occur approximately every 3–6 months for the first 5 years and then annually thereafter; they involve taking the patient's history and performing a physical examination, and they may involve a variety of blood tests and imaging procedures [4].

Our results suggested that patients do not tend to close follow-up. After first year, if patients were in the disease-free period, they would prefer less number of visit regardless types of cancer. Also age, gender, colostomy and port which may cause discomfort are seen snot to be important in terms of compliance.

Patients are more compliant if they receive adjuvant chemotheraphy. Adverse or side effects of chemotheraphy and apprehensiveness about disease may effect on the visit interval in this period [5]. On the other hand, a recent study suggests that how important it is to motivate physicians to strive toward good compliance rates [6]. In this case, physicians' motivation is needed to further investigation.

Considering that all of possible medical, sociocultural and psychological which might be altered the frequency of visits, undoubtedly this study remains quite limited. The retrospective design, short time follow-up period, insufficient data from surgical procedure have other limitations on our study.

In conclusion, there are many data has to do with follow-up cancer patient in the disease-free period. The frequency of outpatient visits in this period could not compatible with general recommendations in clinical practice. Further studies are needed to investigate which factors play role in clinical practice and what are the effects of them on disease.

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