

Analysis of Chemotherapy Telephone Helpline in the Ambulatory Oncology Unit

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Abstract. This study analyzes the telephone helpline chart of the requests from cancer patients on chemotherapy and their families via phone calls. The contents were analyzed by cancer type, stage, and type of therapeutic agents used. Analysis of the subcategories of the helpline calls by the top 6 most frequent cancer types showed that lung and pancreatic cancer had the most frequent problems of pain, and lymphoma had the most common problems of infection. Gastrointestinal cancer manifested many problems related to nutrition. The helpline contents requested by the Stage I, II, and III patients were in the order of nutrition, medication, pain, and infection, whereas the Stage IV cancer patients requested contents related to medication most commonly. The patients on target agents frequently asked about skin changes, and the patients on cytotoxic anticancer drugs requested information on medication and nutrition.

Keywords: chemotherapy, telephone, oncology, helpline, cancer

1 Introduction

According to many foreign studies, Chemotherapy Telephone Helpline was established for cancer patients who are at home after chemotherapy, and helpline was provided by skilled and experienced nurses. The content of the helpline was analyzed, and it was mainly utilized to educate the helpline nurses and improve the quality of the helpline[1,2]. In Korea, however, there are hardly any studies analyzing the content of such telephone helpline, and most of the studies investigated that medical professionals provided intervention by telephone via planned protocols. Likewise, analyses of the contents directly requested by the patients and their families are rarely found [3,4,5].

Therefore, this study analyzes the contents of telephone helpline requested by the patients who stayed at home after chemotherapy and their families for the purpose of health education. This study facilitates the recognition of what the cancer patients and their families would like to know and what issues they face.

2 Objectives

To investigate the general and disease-associated characteristics of the subjects who use the telephone helpline, to confirm the types of helpline contents and frequency by analyzing the helpline contents recorded in the telephone helpline charts and to analyze the telephone helpline contents by cancer type, cancer stage, and type of therapeutic agents

3 Definition of Terminology

3.1 Telephone Helpline

Telephone helpline is defined as providing education, advice, counseling, follow up management, support, and supervision via phone calls[5]. In the present study, telephone helpline means a helpline by which education counseling nurses provide cancer information to cancer patients and their families via phone calls.

3.2 Telephone Helpline Chart

It indicates the telephone helpline chart of the electronic medical record that education counseling nurses use. Telephone helpline charts consist of basic personal information, recent treatment history, test outcomes, and major health complaints of patients.

4 Methods

This study is a retrospective study that analyzes the telephone helpline chart of requests from cancer patients on chemotherapy and their families via phone calls, as recorded by the education counseling nurses. Data collection was performed after obtaining the approval of the Institutional Review Board of the hospitals. The contents of the telephone helpline electronic medical record at the hospitals from March 2012 (when the telephone helpline chart had been first used) to December 2012 were collected and analyzed. The collected data were analyzed using the SPSS win 19.0 program.

5 Results

5.1 Content Analysis of the Telephone Helpline

The items that education counseling nurses considered and checked as main problems while performing telephone helpline were analyzed by items with high frequency. Patients can discuss several questions within a telephone helpline so that the number of helpline contents was different from that of calls ($n = 31,933$), and the number of total helpline contents was 32,794. The most common telephone helpline contents were found to be the management of symptoms that were related to cancer or chemotherapy side effects such as pain, skin changes, and infection (57.9%), followed by the problems related to medication and vaccination (10.9%), nutrition (9.5%), treatment information (6.8%), tests (5.9%), and alternative medicine (4.7%).

Analysis of the subcategories of the helpline contents showed that problems associated with medication (9.8%) were most frequent, followed by nutrition (9.5%), pain (9.1%), skin changes (7.5%), and infection (7.1%).

5.2 Comparison of the Telephone Helpline Contents by Type of Cancer.

In this study, we analyzed the subcategories of the helpline contents by top 6 most frequent cancer types, and the results showed that lung cancer and pancreatic cancer had the most frequent problems regarding pain (10.8% and 9.3%, respectively), and lymphoma had the most common problems of infection (7.3%). Gastrointestinal cancer, such as colon cancer and stomach cancer, showed many problems related to nutrition.

5.3 Comparison of Helpline Contents by Cancer Stage.

The major helpline contents of the Stage I, II, and III patients who were on chemotherapy for complete recovery or reduction of recurrence risk were in the order of nutrition (10.1%), medication (9.3%), pain (8.2%), infection (7.9%), skin changes (6.6%), and nausea and vomiting (6.0%). Stage IV cancer patients who were on chemotherapy for life extension and symptoms relief requested contents regarding problems related to medication (10.7%) most abundantly, followed by pain (10.6%), skin changes (9.1%), nutrition (8.4%) treatment information (6.7%), and test information (5.9%). Stage IV cancer patients were found to have more problems of treatment information compared with Stage I, II, and III cancer patients (6.7% vs. 5.7%), and to have more problems of changing the appointment schedules (3.6% vs. 2.3%).

5.4. Comparison of Helpline Contents by Therapeutic Agents.

Cytotoxic anticancer drugs and targeted agents have completely different major side effects so that the helpline contents of the two therapeutic agents were compared. For the patients on targeted agents, telephone helpline contents regarding skin changes were most common (14.8%), followed by medication (10.7%), pain (8.8%), alternative medicine (5.4%), nutrition (7.3%), and infection (6.2%). The patients on cytotoxic anticancer drugs requested contents regarding many problems of medication (9.7%) and nutrition (9.7%), followed by pain (9.0%) and infection (7.2%).

6 Discussion

This study analyzed the telephone helpline contents of 31,933 calls from cancer patients on chemotherapy and their families between 2005 and 2012. According to the results of this study, the total 1,204 cases of telephone helpline in 2005 were considerably increased to 7,600 cases in 2012. This indicates that there is an increased number of patients who need to self-manage their side effects at home along with the increase of outpatient unit-based treatments due to the impact of rapidly changing medical environment. Telephone helpline can be a useful means of monitoring the symptoms of the patients[6].

The results of this study found that breast cancer was the most frequent cancer type of the subjects requesting telephone helpline (43.8%), and this result is consistent with the study result of Jefford et al[7], showing breast cancer to account for 44% of the helpline contents of the Victorian Cancer Helpline operated by Cancer Council Victoria in Australia. Majem et al[1] also observed that breast cancer was most common(26%) in the analysis of the contents of telephone helpline of the oncology acute toxicity unit.

The analysis of the subcategories of the helpline contents showed that medication was the most frequently asked, followed by nutrition and pain. Similarly, the study by Flannery et al[8] showed that there were many questions related to prescription and medication information. Particularly owing to the short period of outpatient examination time, the cancer patients on outpatient unit-based treatment may obtain insufficient explanation of the dosage, effects, and side effects of the prescribed drugs, and whether the medication should be continued in the presence of abnormal symptoms. Having a high demand for information regarding such drugs is therefore understood. In Korea, a study also reported that the demands for information regarding medication was the highest when investigating the nursing demands of cancer patients after being discharged from the hospital[9].

Based on the results of this study, developing and extending telephone helpline programs are strongly believed to be necessary in order to satisfy the varied demands of cancer patients and their families and resolve the problems occurring outside of hospitals..

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