

Side Effects of Chemotherapy and Coping Strategies adopted by Patients Admitted in a Hospital of Pune City

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Abstract

The purpose of the study was to assess the side effects of chemotherapy and coping strategies adopted by patients admitted in a selected hospital of Pune city. Explorative approach and descriptive survey design was adopted. A total of 100 subjects were selected by non-probability purposive sampling technique. It was found that side-effects were present in mild to moderate form in all the subjects, while none reported side-effects as severe. Majority of subjects were inadequately coping with side effects of chemotherapy. Distracting themselves by chatting with friends, listening to music or TV was found to be major strategy utilised by majority of subjects to cope with nausea. Personal habits was associated with side effects of chemotherapy. Relation was found between family income and personal habits with coping.

Cancer is the second largest non-communicable disease affecting people; approximately 10 million people get cancer every year throughout the world. It is estimated that in 2020, this number will reach 15 million.

Cancer of all forms is causing about 12 percent of deaths throughout the world. The major types of treatment of cancer are surgery, radiotherapy, chemotherapy and biological therapy. Chemotherapy either alone or in combination with other kinds of treatment can increase the life expectancy in the patients with cancer. But unfortunately the resultant increase in survival from chemotherapy is frequently associated with an increased treatment-related morbidity owing to its side effects.

When a person is diagnosed with cancer, he/she may feel as if the whole world has fallen apart. Coping with cancer is difficult but one can find ways to help deal with the diagnosis and side effects of treatment.

Objectives

The study sought to (i) to assess the side effects of chemotherapy and coping strategies adopted by the cancer patients; and (ii) to associate the side effects and coping strategies with selected demographical availables.

Assumptions: (i) All cancer patients undergoing che-

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motherapy may develop side effects, (ii) every individual in stress may use some kind of coping strategies, and (iii) cancer patients who are aware of the side effects may be able to cope better.

Conceptual framework: Sister Callista Roy's adaptation model was used for the study.

Literature Review

Tamilarasi et al (2009) in their study on improving quality of life in breast cancer survivors found that cancer is one of the most frequent causes of death. The incidence of breast cancer is rising in all countries especially in developing countries such as India. Marimuthu P (2008) in a study on cancer incidence in five cities (Bangalore, Delhi, Bhopal, Mumbai and Chennai) with highest increase of 26 percent in Delhi, in a span of eight years.

Treister & Woo (2008) brought out that approximately half of all patients who received chemotherapy developed severe oral mucositis. According to Bachelor (2001), alopecia is one of the most common side-effects of chemotherapy and can range from sporadic thinning of the hair to complete baldness.

Phianmongkhon & Suwan (2008) in their study on patients with cancer of the female reproductive system receiving chemotherapy found that majority of them could best manage anorexia; 17.4 percent by eating as much as they can and 32.6 percent by selecting foods different from normal, such as fruit, sweetmeats, noodles, milk. For nausea and vomiting, 31.3 percent managed by eating fruit,

drinking sour juice, and holding sour fruit in mouth, and 16.0 percent used the breathing method, eating something cold, such as ice-cream, or hot food like noodles. Shaw et al (2007) found that women used commonly two strategies for their diagnosis and subsequent treatment: participating in computed support groups and turning to religious activities. Several different coping methods were used such as putting trust in god about the course of their illness, being less afraid of death, finding blessings in their lives and accepting their cancer experience in a more constructive religious vein.

Methodology

The research design was non-experimental descriptive and it was an explorative approach. The study was conducted in a 550-bedded multi-specialty private hospital in Pune, with sophisticated diagnostic and treatment modalities.

Attribute variables:

Age, gender, religion, residence, education qualification, occupation, marital status, types of family, family income per month, personal habits, diagnosis, stage of cancer, history of cancer in the family, chemotherapeutic drug used, cycles of chemotherapy, information received about coping with side effects and support person.

Cancer patients, above the age group of 18 years, receiving chemotherapy and admitted in a selected hospital of the Pune city constituted the target population. Non-probability purposive sampling was used; the sample size was 100.

Inclusion criteria: Cancer patients above the age of 18 years, receiving chemotherapeutic drugs with ability to read and write English, Hindi and Marathi, and who were willing to participate in the study.

Exclusion criteria: Cancer patients receiving first cycle of chemotherapy, or those receiving combination of therapy.

Tools

The tool for the study consisted of 3 sections. *Section-I*: Self structured questionnaire for demographic data, consisting of 16 items. *Section-II*: Rating scale-I to assess side effects of chemotherapy, consisted of 12 common side effects of chemotherapy. *Section-III*: Rating scale-II to assess coping strategies adopted by patients consisted of 5 coping strategies for each 12 common side effects of chemotherapy.

Validity: Content validity of tool was done by experts in the field.

Reliability: Cronbach's Alpha test was used.

Section II (Rating scale-I to assess side effects of chemotherapy) reliability was 0.81

Section III (Rating scale-II to assess coping strategies) reliability was 0.80

All result was more than 0.8, so tool was highly reliable.

Data Collection

After formal permission from hospital authorities, data collection was conducted from 7 October 2010 to 27 October 2010. The investigator herself administered a self-structured questionnaire and rating scale to the samples. The duration of data collection for each sample was 30 to 40 minutes. Every day approximately 5-6 samples were taken for data collection. Investigator took 20 days to collect data from 100 samples.

Results and Discussion

Demographic information

It was found that 45 percent of respondents were in 44-56 years of age group; 68 percent were female. Majority of the respondents (81%) were Hindu. Majority (85%) were residing in urban areas; 40 percent subjects were secondary school educated, 44 percent were unemployed. Majority of respondents (86%) were married; 55 percent were not having any habits like smoking, tobacco chewing, alcohol consumption. Many (65%) of respondents belonged to nuclear family. Majority (38%) had family income between Rs. 10000-15000; 80 percent said they do not have family history of cancer. Majority (50%) of respondent said their mother was suffering from cancer; 71 percent were supported by their spouse. Sizeable number of respondents (33%) were diagnosed as having breast cancer; 70 percent were in their II stage of cancer. Majority of respondents (52%) were receiving pyrimidine antagonist group of chemotherapeutic drug; 60 percent of respondents were receiving III cycle of chemotherapy. Majority (97%) of respondents said they received information for coping with side effects of chemotherapy, and all received information from health professionals.

Side effects of chemotherapy (Table 1)

Alopecia was the main side effect of chemotherapy, as majority (72%) of respondents said they experienced alopecia. However nausea was present in 62

Table 1: Association of side effects with selected demographic variables

S.No.	Demographic Variables	Chi-square value	Degree of freedom	p-value	Level of significance	Significance
1.	Age	0.59	4	0.96	>0.05	Not significant
2.	Gender	1.19	1	0.28	>0.05	Not significant
3.	Diagnosis	7.06	7	0.42	>0.05	Not significant
4.	Cycles of Chemotherapy	1.68	5	0.79	>0.05	Not significant
5.	Chemotherapeutic Drugs	4.91	4	0.30	>0.05	Not significant
6.	Stage of cancer	3.60	4	0.46	>0.05	Not significant
7.	Personal habit	19.15	1	0.00	<0.05	Significant

Note: Significant association was found between side effects and Personal habits as p-value was less than 0.05.

percent of cases, while 57 percent reported they experienced taste change, in 53 percent of cases tiredness was present. Anxiety was reported by 38 percent, while constipation was present in 37 percent and feeling of sadness in 37 percent of cases. Mouth ulcer was present in 36 percent. Vomiting was present in 34 percent. Loss of appetite was present in 26 percent, and repeated infection was present in 10 percent of cases and loose stools found only in 8 percent.

Majority of respondents (61%) were having mild side effects and remaining 39 percent were having moderate side effects of chemotherapy while none reported side effects as severe.

Coping with side effects of chemotherapy (Table 2)

Majority of respondents (90%) were inadequately coping while only 10 percent were adequately coping with side effects.

Distracting themselves by chatting with friends, listening to music or TV was found to be major strategy utilised by majority (51%) of subjects to cope with nausea; 32 percent said they always take medicine for vomiting; 7 percent said they always drink lots of clear liquids to deal with loose motion. Constipation was managed by 36 percent of subjects with always adding more fibre to their diet; 49 percent said they always brush after each meal to cope with taste change; 30 percent of respondents said they always avoid spicy, hot foods and drinks to deal with mouth ulcer; 26 percent said they always eat whenever they feel hungry; 45 percent said they always maintain their routine schedule to avoid fatigue; 9 percent said they visited a doctor frequently to cope with infection; 70 percent said they always cover their hair with scarf for hair loss; 34 percent said they always concentrate

their efforts doing something to avoid anxiety, and 34 percent said they always put their trust on god/religious activity to cope with depression.

According to Yeole (2006), the incidence of breast cancer among females stood at 1,02,782 and death rate 52,750 in 2008. In this study it was found that majority (33%) of the respondents were suffering from breast cancer, as compared to other types of cancer. Lock & Willson (2002) stated that the patient identified one-to-one discussion with nurses

and doctors as the preferred way to receive information. In a review of the patient experience after chemotherapy, endocrine therapy and antibody therapy, Gronvold & Jansen (2007) found that common side effects of chemotherapy include hair loss, nausea, hot flashes, mucositis, fatigue and cognitive side effects. In this study also majority (72%) of respondents suffered from alopecia followed by nausea, taste change, tiredness, anxiety, constipation, feeling of sadness, mouth ulcer, vomiting, loss of appetite, repeated infection and loose motions.

Implications of Study

Nursing practice

Patient teaching is the primary function of all nurses and should be carried out routinely. The information from this study will help the nurse to provide information regarding various coping strategies which will help them to make the patient understand and lead a complication-free life during therapy.

Nursing education

Present study emphasises the need for the reinforcing the adequate coping strategies to the cancer patient by the nursing education. This study will help students and nurses to identify the common side effects of chemotherapy and the common strategies used in order to minimise the side effects.

Nursing administration

Administrator may plan for an in-service education for all nursing personnel regarding the importance of counselling the cancer patient who are receiving chemotherapy.

Table 2: Association of coping strategies with selected demographic variables

S.No	Demographic Variables	Chi-Square value	Degree of freedom	p-value	Level of significance	Significance
1.	Age	2.54	4	0.636	>0.05	Not significant
2.	Gender	0.33	1	0.568	>0.05	Not significant
3.	Religion	1.51	3	0.679	>0.05	Not significant
4.	Residence	1.96	1	0.161	>0.05	Not significant
5.	Education	1.53	4	0.822	>0.05	Not significant
6.	Occupation	3.65	4	0.455	>0.05	Not significant
7.	Marital status	1.80	4	0.771	>0.05	Not significant
8.	Type of family	0.12	1	0.998	>0.05	Not significant
9.	Diagnosis	7.73	7	0.356	>0.05	Not significant
10.	Stage of cancer	0.71	2	0.700	>0.05	Not significant
11.	History of cancer in family	0.69	1	0.405	>0.05	Not significant
12.	Cycles of chemotherapy	4.22	5	0.376	>0.05	Not significant
13.	Received information about chemotherapy	0.34	1	0.558	>0.05	Not significant
14.	Support person	0.28	4	0.991	>0.05	Not significant
15.	Personal habit	23.95	9	0.004	<0.05	Significant
16.	Monthly family income	8.46	3	0.037	<0.05	Significant

Note: Significant association was found between monthly family income and coping strategies, as p-value was less than 0.05. Significant association was found between personal habit and coping strategies, as p-value was less than 0.05

Nursing research

The present study emphasises the need for extended and intensive nursing research in the area of cancer patient who are receiving chemotherapy and suffering from side effects to develop better strategies to address the issues of patients.

Recommendations

- ♦ A study can be done on cancer patient who are receiving similar category of chemotherapeutic drugs.
- ♦ A study can be conducted to assess the care taker burden and the coping strategies adopted.
- ♦ A survey to assess the coping strategies on side effects can be undertaken for cancer patients in all communities.
- ♦ A similar study can be replicated on a large sample.

Conclusion

In this study all the samples were suffering from common side effects of chemotherapy in mild to moderate form and 97 percent of the respondents

were aware of the side effects, and ways to cope with the side effects of chemotherapy. However, a majority (90%) of them were not adequately coping with side effects.

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