

Knowledge gained through Implementation of an Educational Programme can help in minimizing acute radiotherapy side effect for breast cancer

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Abstract

Background:

Radiation therapy is highly targeted highly effective way to destroy cancer cell that may linger after surgery and this will reduces recurrences, many patients have misperception and great fear about radiation therapy and its side effect .in addition there is marked lack of knowledge among patients regarding the importance of radiation therapy and benefit to start the treatment early and not to interrupt the course of treatment. For all these above mentioned reasons, this project selected to assess the effect of education in reducing side effect of radiation therapy for breast cancer patient treated with radiotherapy . .

Aim:

The cancer patients who are receiving this treatment modality should be familiar to side effects of radiation therapy and the measure to manage the side effects.

Methods:

The study was conducted at radiotherapy out patient's clinic of national cancer institute- university of Gezira Wadmadni in Sudan. The participants were patients with breast cancer on radiotherapy therapy. The total number of patients attending the hospital during the study duration was 600 patients. The sample size enrolled in the study was 100patients. The sampling method used was the non-probability convenience sampling. The participants' knowledge about different aspects of radiotherapy and it's side effect were assessed before and after implementation of a structured education programme .

Results

The participants' knowledge improved significantly after implementation of the structured educational programme about the time of warfarin dose, and what to do if a dose is missed. Also their knowledge improved significantly about the diet and drugs that interact with warfarin, warfarin storage at home, keeping an identifying card about warfarin and physician notification if the patient is undergoing surgery.

Conclusion

The structured educational programme had a statistically significant positive impact on the participants' the essential knowledge about warfarin anticoagulation therapy. Construction and implementation of such is advised to be part and parcel of the anticoagulation management package with warfarin.

Keywords: health educational program, breast cancer, radiotherapy side effects.

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I. Introduction

Radiation therapy is the use of ionizing radiation for the purpose of control or cure of cancer or the palliation of symptoms due to advanced cancer. Ionizing radiation causes damage to the DNA of cells, limiting their ability to divide and reproduce (1) Radiation therapy is a highly targeted and highly effective way to destroy cancer cells in the breast that may stick around after surgery. Radiation can reduce the risk of breast cancer recurrence by about 70%. Despite what many people fear, radiation therapy is relatively easy to tolerate and its side effects are limited to the treated area. (2)

Radiotherapy often causes serious side effects in women receiving treatment for breast cancer.

Side effects of radiation therapy include fatigue and a red, sunburn-like rash where the radiation is aimed. Breast tissue may also appear swollen or more firm. These side effects can be overwhelming.(12)

If women are unable to develop effective self-care behaviors to manage these side effects, they may delay or terminate their treatment regimen prematurely. (1)

Many patients with breast cancer experience anxiety related to their diagnosis and the side effects of radiotherapy. (3) Anxiety can trigger depression, and some researchers have found evidence that suggests that women who are depressed may be less able to perform self-care behaviors (2)

Teaching patients how to reduce their anxiety may help them to manage side effects through self-care behaviors

Researchers have identified self-care behaviors to manage the common side effects of treatment (4)
The occurrence of side effects, or the fear of having side effects, often leads to patients missing or stopping treatments (3).

About 50% of patients don't follow through with their full treatments, according to the American Cancer Society, and cancer patients often feel loss of control and feel powerless (8)

The frequent presence of depression significantly influence[s]"the severity of fatigue and anxiety in cancer patients (5)

The majority of patients report significant lifestyle changes. Some have insomnia. Some stop working or work shorter schedules. For others, cancer and its treatment badly affect their household duties and leisure activities .Quality of life is often significantly lessened (6).

II. Results

Table (1) Showing the Participants' Response in pre and post- tests Regarding know how to deal the side effect

	<i>Do you know how to manage the side effect</i>		<i>Total</i>
	<i>Yes</i>	<i>NO</i>	
<i>Pre</i>	10	90	100
	5%	45.0%	50.0%
<i>Post</i>	82	18	100
	41.0%	9.0%	50.0%
<i>Total</i>	92	108	200
	46. 0%	54.0%	100.0%

The participants' knowledge about Regarding know how to deal the side effect (Table 1) improved significantly after the implementation of the educational programme . (P-value = 0.04)

Table (2) Showing the Participants' Response in pre and post- tests about maintaining body weight

	<i>Followed instructions about maintaining your weight (having adequate caloric and protein intake)</i>			<i>Total</i>
	<i>Most of the time</i>	<i>None of the time</i>	<i>Some of the time</i>	
<i>Pre</i>	36	8	56	100
	18.0%	4.0%	28.0%	50.0%
<i>Post</i>	41	39	20	100
	20.5%	19.5%	10.0%	50.0%
<i>Total</i>	77	47	76	200
	38.5%	23.5%	38.0%	100.0%

P-value = 0.00

The participants' knowledge about maintaining body weight

(Table 2) improved significantly after the implementation of the educational programme (P-value = 0.00).

Table (3) Showing the Participants' Response in pre and post tests about taking fluids as recommended every day.

	<i>Drank fluids as recommended every day</i>			<i>Total</i>
	<i>most of time</i>	<i>None of time</i>	<i>some of time</i>	
<i>Pre</i>	11	58	31	100
	5.5%	29.0%	15.5%	50.0%
<i>Post</i>	72	17	11	100
	36.0%	8.5%	5.5%	50.0%
<i>Total</i>	83	75	42	200
	41.5%	37.5%	21.0%	100.0%

P-value = 0.00

The participants' knowledge about the about taking fluids as recommended **every day** (Table 3) improved significantly after the implementation of the educational programme (P-value = 0.000).

Table (4) Showing the Participants' Response in pre and post tests about the Followed activity recommendations

	Followed activity recommendations (pacing yourself or planning rest periods when tired)			Total
	most of time	None of time	some of time	
Pre	7 3.5%	63 31.5%	30 15.0%	100 50.0%
Post	72 36.0%	17 8.5%	11 5.5%	100 50.0%
Total	79 39.5%	80 40.0%	41 20.5%	200 100.0%

P-value = 0.00

The participants' knowledge about the about Followed activity recommendations (Table 4) improved significantly after the implementation of the educational programme (P-value = 0.00).

Table (5) Showing the Participants' Response in pre and post tests about skin care during radiotherapy.

		Pre and Post test results		Total
		Pre	Post	
1. concerns that washing with soap and water	Count	22	78	100
	% within Pre and Post	22%	78.4%	100.0%
2. Wear loose-fitting clothing over the irradiated area	Count	34	66	100
	% within Pre and Post	34.0%	66%	100%
3. Protect skin from sun exposure	Count	40	60	100
	% within Pre and Post	40. %	60 %	100%
Minimize skin trauma from excessive movement, exposure to extreme temperatures, or adhesives	Count	17	83	100
	% within Pre and Post	17 %	83%	100%

The participants' knowledge about skin care during radiotherapy (Table 4) improved significantly after the implementation of the educational programme (P-value = 0.000).

III. Discussion

The response regarding how to manage side effect of radiotherapy good by 92% post intervention, result is similar to the finding in other study conducted to assess the effectiveness of planned teaching programme on knowledge about management of side effects for cancer patients undergoing chemotherapy at oncology OPD of MSRMTH, Bangalore. The study revealed that planned teaching programme increased the knowledge of the patients regarding the management of side effects of chemotherapy in which the post test knowledge score was 68% with the pre test score being 32%(22)

In the same line the result of adherent to nutritional regime showed 76% of participants in pre intervention have poor nutrition knowledge. A study was done to determine the knowledge, attitudes and practices of young Malaysians towards nutrition related to cancer treatment, the study concluded that 83% of participants had poor knowledge on nutrition as related to cancer treatment (Shintani, Ikeda & Matsumoto, 2012), study also concluded that unsatisfactory knowledge was observed regarding European Journal of Business and Management www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.13, 2014 136 nutritional management among patients undergoing chemotherapy (Aimono, & Sakamoto, 2012).

Concerning management of fatigue was poor responses by 7% in pre intervention, the result then improved as very good by 72% in post intervention. fatigue patients are less physically active, less able to participate in enjoyable activities with increased weakness; in addition, fatigue may be indicators of tiredness, such as reduced energy expenditure, sleep disturbance, decreased endurance, and weakness (Muhbes, Hadayat, & Amasha, 2012). Fatigue is one of the most common symptoms that cancer patients experience when receiving treatment with chemotherapy and/or radiation. Percentages of patients who experience cancer-related fatigue vary across studies from 25% to 100% depending on the type of treatment and the type and stage of cancer (Berger, 2009).

The client's knowledge pre intervention regarding the prevention of radiation dermatitis washing the treatment area with lukewarm water and mild soap is poor 64% were kept the area without washing. There was many well conducted studies evidenced this issue.

A Cancer Care Ontario guideline for the prevention of skin reactions suggests skin washing with mild soap and water, but because of limited evidence, suggests no specific products for prevention or management (24) Although the data supporting the use of soap and water in the radiation fields are somewhat limited, recommendations have nevertheless evolved such that patients are commonly advised to wash their skin daily with warm water and soap while avoiding scrubbing of the skin. Generally, the use of mild pH-neutral or non-alkaline soaps is recommended. (23)

Washing with water or water and soap is not associated with skin toxicity [25,26] therefore it is recommended that patients be allowed to wash with a mild soap.

In preventing skin toxicity through protecting irradiated area from exposing to sun area showed the knowledge of participants as good by 50% in pre intervention phase, 81% in post intervention And this evidence may be refers to that it had being mention before

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