

Impact of Nursing Management Protocol on Radiotherapy Induced GIT Side Effects (Nausea, Vomiting, And Diarrhea) In Patients with

By **Amany M. Shebl**

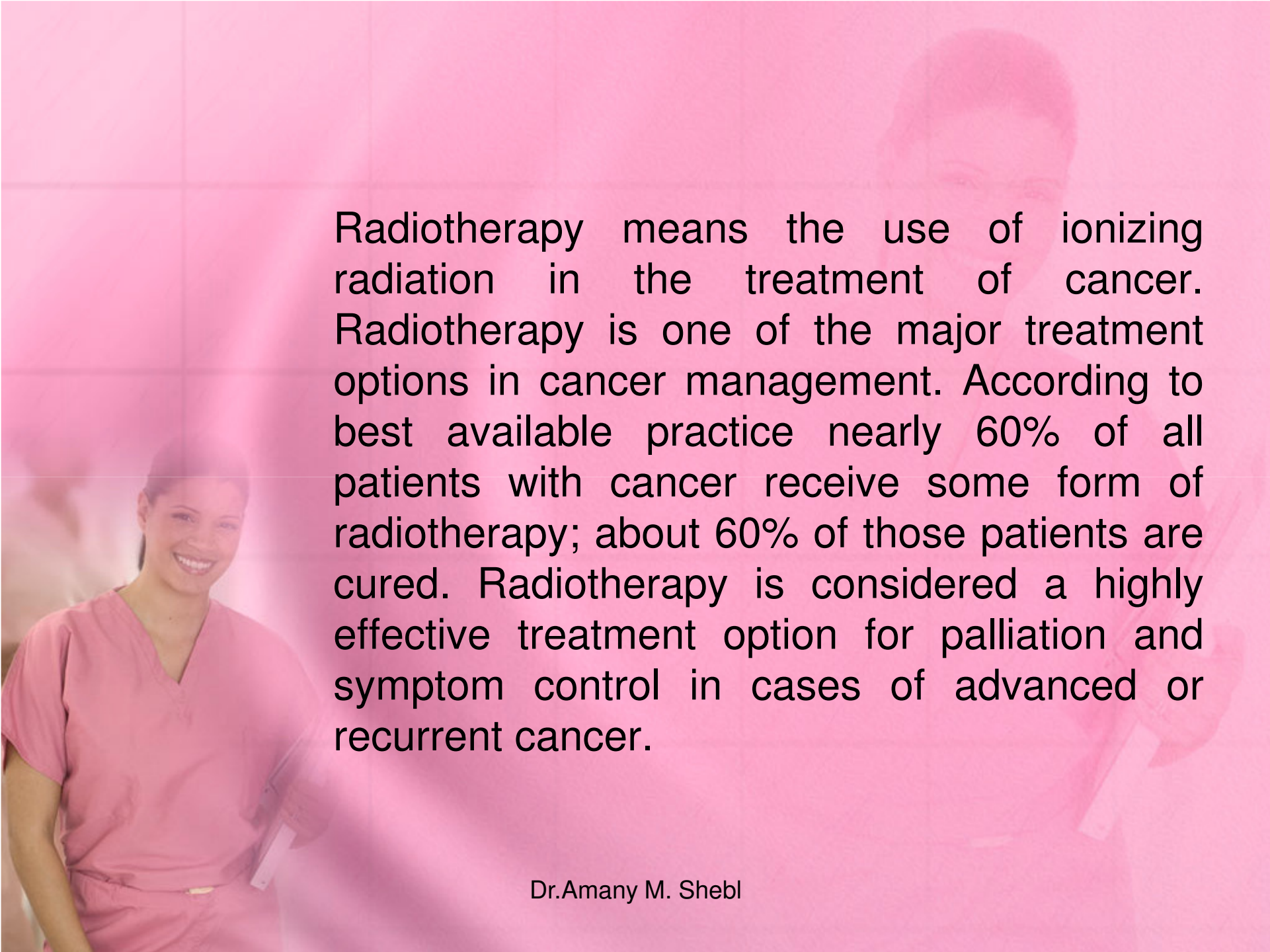
Cancer

Professor of Medical-surgical Nursing

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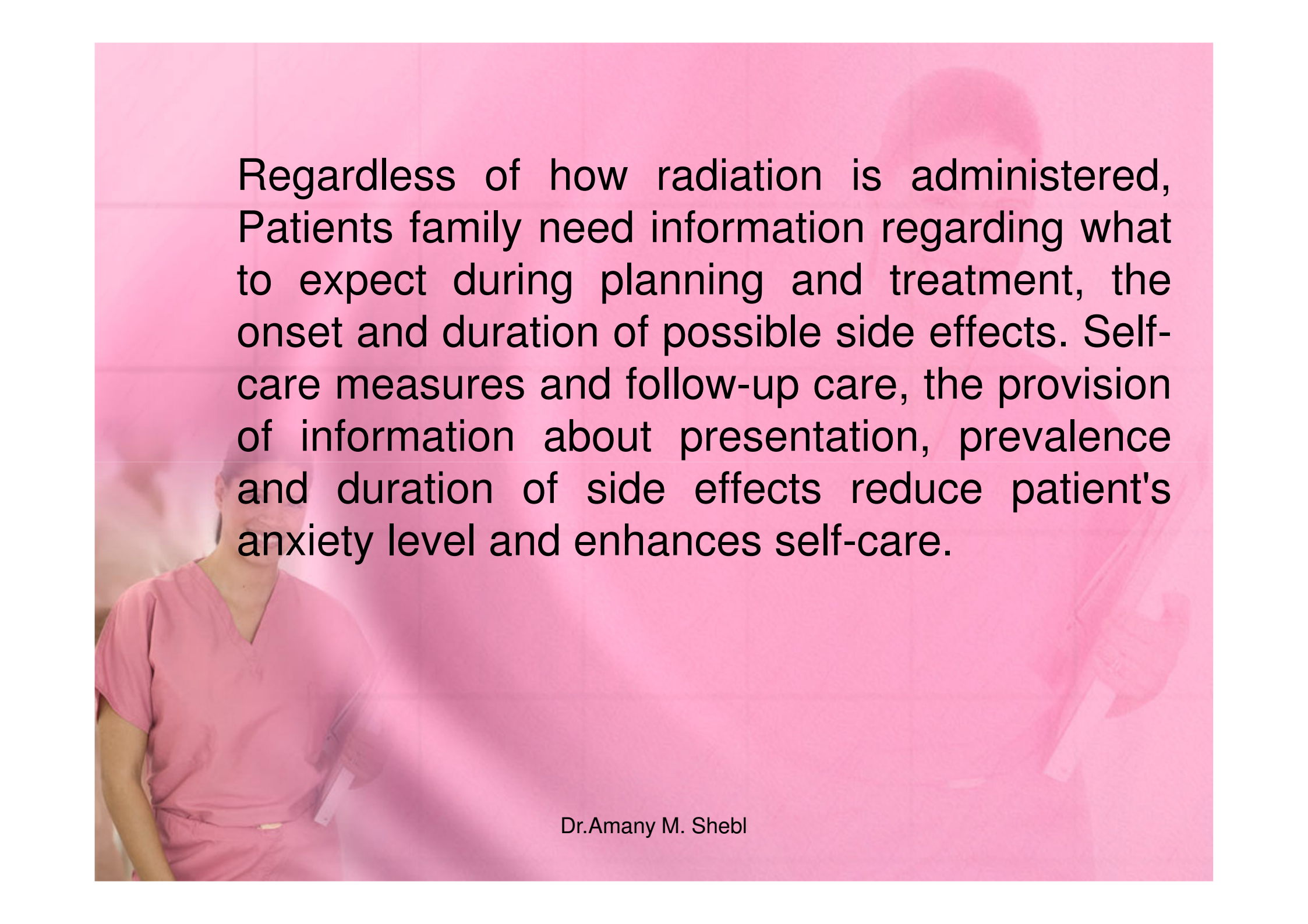
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Radiotherapy means the use of ionizing radiation in the treatment of cancer. Radiotherapy is one of the major treatment options in cancer management. According to best available practice nearly 60% of all patients with cancer receive some form of radiotherapy; about 60% of those patients are cured. Radiotherapy is considered a highly effective treatment option for palliation and symptom control in cases of advanced or recurrent cancer.

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Regardless of how radiation is administered, Patients family need information regarding what to expect during planning and treatment, the onset and duration of possible side effects. Self-care measures and follow-up care, the provision of information about presentation, prevalence and duration of side effects reduce patient's anxiety level and enhances self-care.

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Aim of the study

- The study was conducted to determine the impact of Nursing Management Protocol on Radiotherapy Induced GIT Side Effects (Nausea, Vomiting, And Diarrhea) In Patients with Cancer

Research Hypothesis

- Decrease incidence and severity of
- GIT side effect and improve of
- patients' knowledge after
- implementation of nursing
- management protocol on radiotherapy
- induced GIT side effect.

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Materials & Method

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Materials

- ***Research design***

Quasi-experimental research design was utilized in this study.

- ***Subjects:***

The Sample of this study is comprised of 200 adult patients of both males and females who were randomly selected, diagnosed as having cancer, and planned to receive radiotherapy.

- ***Settings of the study***

The study was carried out in the inpatients ward and radiotherapy administration setting (out patients) of the Clinical Oncology and Nuclear Medicine Department at Mansoura University Main Hospital.

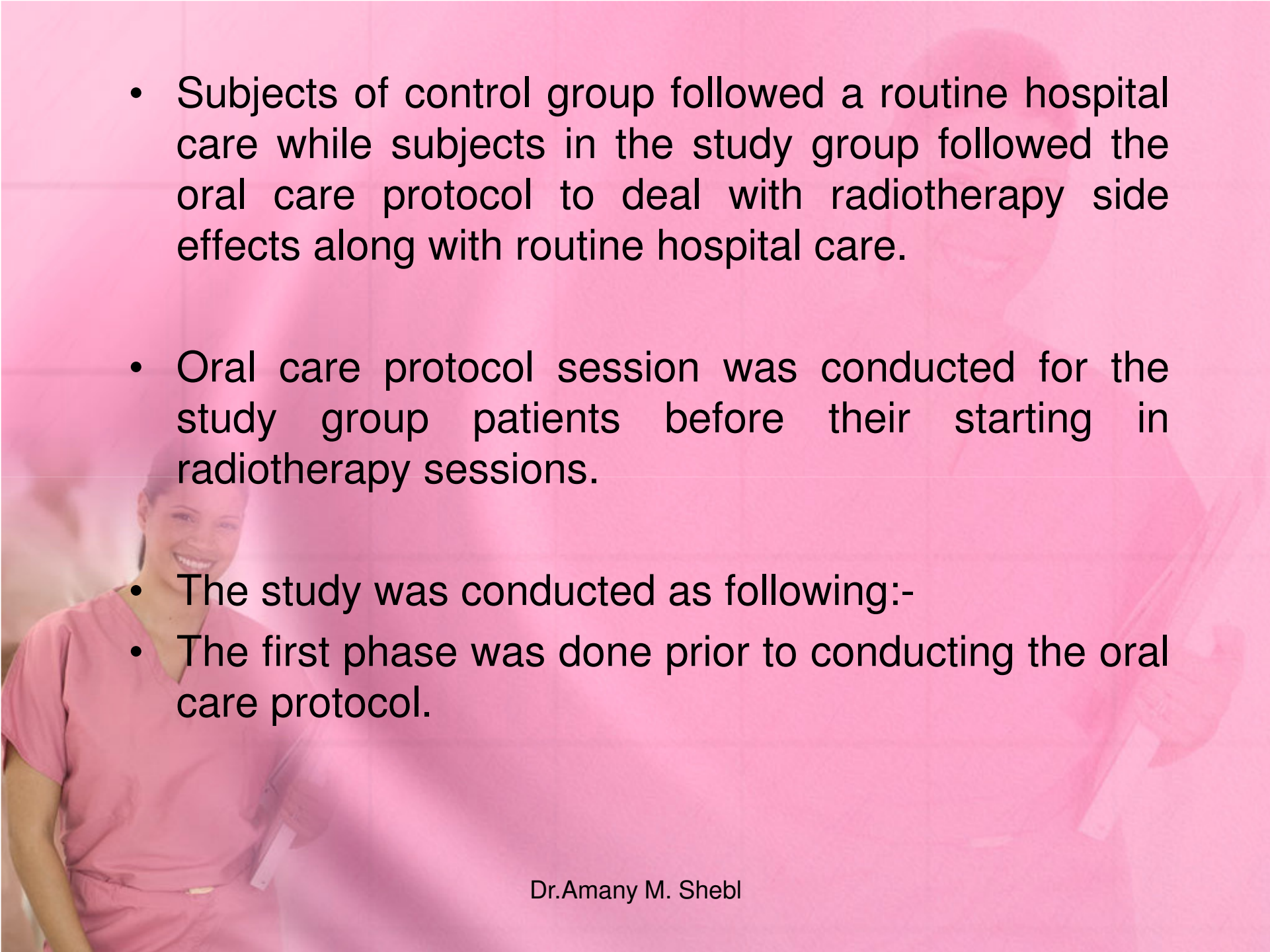
Tools of the study

- **Tool I: Patient knowledge Structured Interview schedule:** This tool included two parts:
Part 1: Bio-socio-demographic data and medical data sheet.
Part 2: Patient's knowledge related to side effects of radiotherapy.
- **Tool II: Nausea and vomiting assessment scale:**
Developed by American Society of Clinical oncology It was used to assess the incidence and the severity of nausea and vomiting in all phases of assessment for both groups



- **Tool III: Diarrhea Assessment Scale**

Developed by American Society of Clinical oncology and adapted by the researchers for assessing the incidence and the severity of diarrhea.

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- Subjects of control group followed a routine hospital care while subjects in the study group followed the oral care protocol to deal with radiotherapy side effects along with routine hospital care.
 - Oral care protocol session was conducted for the study group patients before their starting in radiotherapy sessions.
 - The study was conducted as following:-
 - The first phase was done prior to conducting the oral care protocol.

- The second phase was done immediately post implementing oral care protocol, the third phase was done after two third of the radiotherapy sessions, and the fourth phase was done immediately after finishing the course of radiotherapy sessions.
- Implementation of oral care protocol. The implementation phase was done through five major sessions; each session was conducted for 5 to10 patients sometimes for each patient individually according his condition, one session per day; the time allowed varies between 20-50 minutes.
- All sessions were ended before the second phase of assessment. All Patients in the study group should perform oral care correctly at the end of sessions.

Results

- There were significant differences between scores of the study group pre and post implementation of nursing management protocol in relation to all items of GIT radiotherapy side effects including stomatitis, nausea, vomiting, and diarrhea where $t=(86.176, 55.649, \text{ and } 58.896)$ at $p \leq 0.001^{**}$.

Table (3): Comparison between patient's total knowledge of both groups (study & control groups) before and after nursing management protocol implementation

Item	Study group	Control group	t	P- value
	Mean \pm SD	Mean \pm SD		
Total Knowledge Score				
Before implementation	22.92 \pm 7.9	18.3 \pm 9.02	3.76	>0.05
▪ Immediate after	54.84 \pm 7.81	24.15 \pm 8.86	25.986	$\leq 0.001^{**}$
▪ Before vs. after	t	28.018	4.321	
	p	< 0.001 ^{**}	< 0.01	
▪ After 1	53.44 \pm 8.1	27.8 \pm 8.72	21.479	$\leq 0.001^{**}$
▪ After 2	52.1 \pm 8.88	30.27 \pm 9.47	16.812	$\leq 0.001^{**}$

Table (4): Comparison between patient's knowledge concerning dealing with GIT radiotherapy side effects (nausea, vomiting, and diarrhea) of both studied groups (the study and control) before and after nursing management protocol implementation

GIT radiotherapy side effects	Group		t	P- value
	Study group Mean± SD	Control group Mean± SD		
Nausea and vomiting:				
▪ Before implementation	1.15±0.77	1.04 ± 0.66	0.320	>0.05
▪ Immediate after	11.0±1.57	1.55±0.93	51.701	≤ 0.001**
▪ before vs. after	t	55.649	7.913	
	p	≤ 0.001	≤ 0.001	
▪ After 1	10.38±2.34	1.71±1.16	33.126	≤ 0.001**
▪ After 2	10.26±2.26	1.82±1.25	32.639	≤ 0.001**
Diarrhea :				
▪ Before implementation	0.98±0.79	0.87±0.46	0.218	>0.05
▪ Immediate after	7.6±0.80	1.35±0.68	59.092	≤ 0.001**
▪ Before vs.	t	58.896	5.85	
after	p	≤ 0.001	≤ 0.001	
▪ After 1	7.4±1.04	1.57±1.04	39.433	≤ 0.001**
▪ After 2	7.18±1.40	1.71±1.26	28.954	≤ 0.001**

Table (5): Impact of relaxation technique and diet modifications on incidence of nausea and vomiting radiotherapy side effect of the study and control groups at pre, post, and follow up tests

Nausea assessment scale	Pre test 1st assess	Post test 2nd assess	Follow up1 3rd assess	Follow up2 4th assess
▪ Study group				
Mean± SD	0.0±0.0	0.0±0.0	0.02±0.14	0.08±0.27
▪ Control group				
Mean± SD	1.0±0.0	0.06±0.23	0.36±0.48	0.48±0.502
T		2.514	6.766	7.001
P		< 0.05	≤ 0.001 ^{**}	≤ 0.001 ^{**}
Vomiting assessment scale	Pre test 1st assess	Post test 2nd assess	Follow up1 3rd assess	Follow up2 4th assess
▪ Study group				
Mean± SD	0.0±0.0	0.0±0.0	0.0±0.0	0.02±0.14
▪ Control group				
Mean± SD	0.0±0.0	0.03±0.17	0.11±0.31	0.22±0.56
T		2.514	6.766	6.766
P		< 0.05	≤ 0.001 ^{**}	≤ 0.001 ^{**}

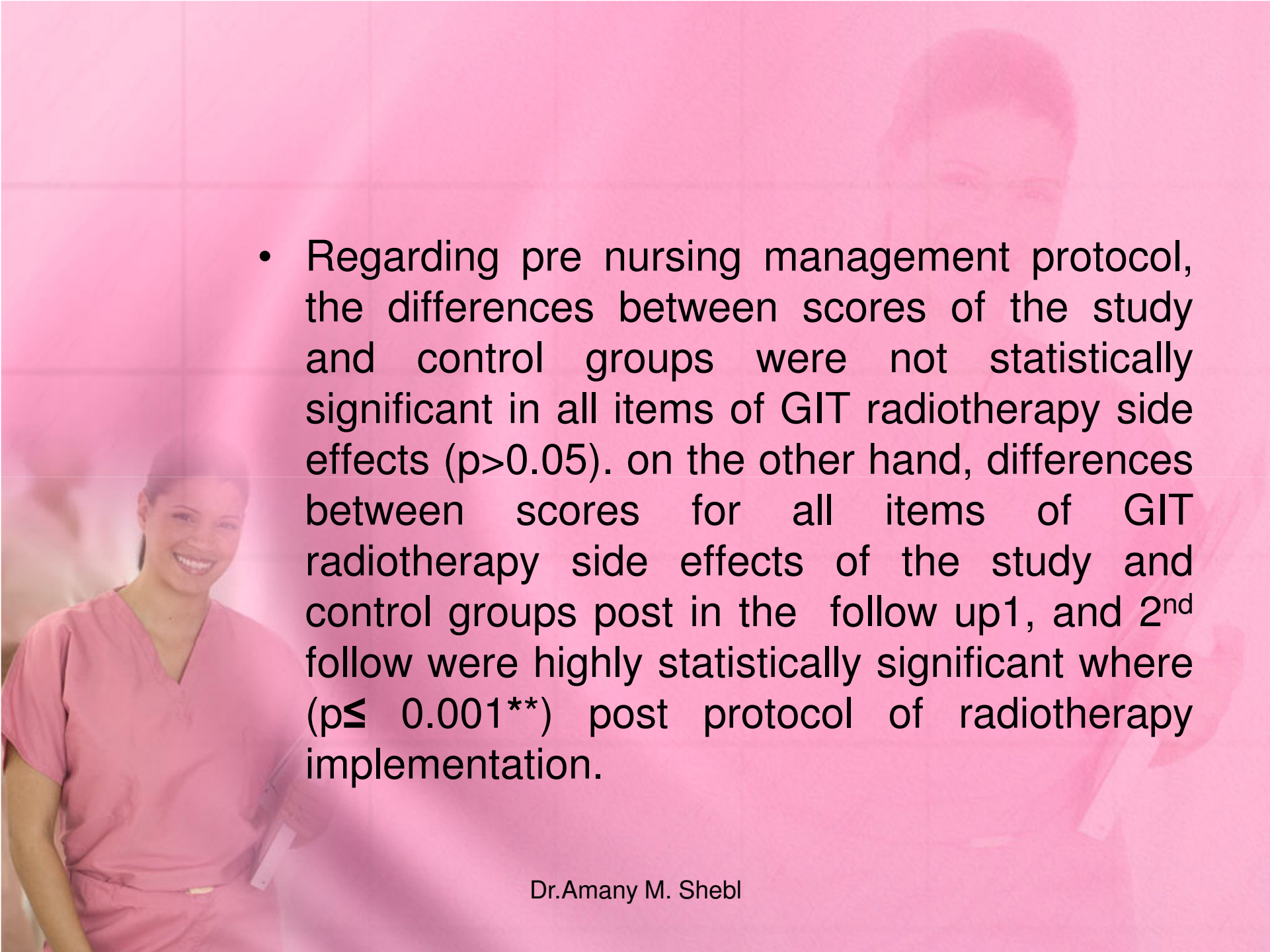
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- Regarding pre nursing management protocol, the differences between scores of the study and control groups were not statistically significant in all items of GIT radiotherapy side effects ($p > 0.05$). on the other hand, differences between scores for all items of GIT radiotherapy side effects of the study and control groups post in the follow up1, and 2nd follow were highly statistically significant where ($p \leq 0.001^{**}$) post protocol of radiotherapy implementation.

Table (6): Impact of diet modifications on incidence of diarrhea as radiotherapy side effect of the study and control groups' pre, post, and follow up tests

Diarrhea assessment scale	Pre test 1st assess	Post test 2nd assess	Follow up1 3rd assess	Follow up2 4th assess
Study group				
Mean± SD	0.0±0.0	0.0±0.0	0.0±0.0	0.16±0.37
Control group				
Mean± SD	0.0±0.0	0.06±0.23	0.30±0.66	0.71±1.15
T		2.514	6.766	7.001
p		≤ 0.05	≤ 0.001 ^{**}	≤ 0.001 ^{**}

Conclusions

- the results of the current study revealed that, both incidence and severity of GIT symptoms were significantly decreased in the study group after implementation of nursing management protocol

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Recommendations

- Patients with cancer should be given a written instruction about their radiotherapy and self-management measures to radiotherapy.
- Nursing management protocol should be integrated within the plan of care for Patients with cancer going to radiotherapy

Thank You



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