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Research Article

EFFECTIVENESS OF OLIVE OIL MASSAGE ON PREVENTION OF DECUBITUS ULCER AMONG BEDRIDDEN PATIENTS

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Massage: circular motion massage given for about 10-15 sec using tips of finger on each pressure points.
Bedridden: persons who are unable to get out of bed by themselves, non ambulatory patients.

ABSTRACT

Patients who are confined to bed are at the risk for developing decubitus ulcer on the body prominences areas.
The aim of the study was to assess the effectiveness of olive oil massage on prevention of decubitus ulcer among bedridden patients.
The research design adopted for the study was a Quasi-experimental (pretest posttest control group) design.
The tool consisted of demographic variables (personal data and clinical data) and observation checklist to assess the signs and symptoms of decubitus ulcer.
The study sample consisted of 40, (20 control and 20 experimental)in which olive oil massage were provided twice daily for 7 days in experimental group. The pressure points of decubitus ulcer was assessed by using the observation checklist.
The main findings of the study shown that there were reduction in the signs and symptoms of decubitus ulcer in experimental group as compared to control group. The mean score in pretest was 1 which reduced to 0.6 in day 7 posttest without further increase in experimental group. In control group, the mean score in pretest was 0.6 which increased to 2 in day 7 posttest, indicating that decubitus ulcer increased significantly without olive oil massage.
The study revealed that olive oil massage was effective on prevention of decubitus ulcer.

INTRODUCTION

Decubitus ulcers are areas where skin and underlying tissues are eroded because of lack of blood flow. They are also called bedsores and pressure sores. Decubiti occur most often in elderly, paralyzed, obese, or very thin and malnourished patients. The first sign of a decubitus ulcer is pale or white skin or a redden area. The patient may complain of pain, burning, or tingling in the area while some patient do not feel any abnormal sensations. [1]

According to the National Pressure Ulcer Advisory Panel, "Pressure ulcers are defined as localized areas of tissue necrosis that tend to develop when soft tissue is compressed between a bony prominence and an external surface for a period of time". Decubitus ulcer are a National Health concern because, the most part, they are a preventable cost complication. Decubitus, a Latin word referring to the reclining position[2]. So, decubitus ulcers are ulcers which are developed on lying a flat position.

Advanced sores are slow to heal, so early identification of risk groups and appropriate nursing intervention is best way to prevent decubitus ulcer. Decubitus ulcer prevention strategies include skin assessment at least daily for redness or signs of discolouration.[3]

Objectives of the Study

1. To assess the pressure points for decubitus ulcer among bed ridden patients before olive oil massage in experimental and control group.
2. To assess the pressure points for decubitus ulcer among bed ridden patients after olive oil massage in experimental group.
3. To assess the pressure points for decubitus ulcer among bed ridden patients without olive oil massage in control group.
4. To compare pre and post score in experimental and control group
5. To associate the findings with the selected demographic variables

Hypothesis

H_0: There will be no significant effect of olive oil massage on prevention of decubitus ulcer among bedridden patients in selected hospitals of Pune city.

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MATERIALS AND METHODS

Research Approach: Quantitative approach

Research Design*:* The research method adopted for the study was Quasi-Experimental Research design. Keeping in view the objectives of the study, the researcher selected the pre-test post-test control group design.

Experimental group	Pre-test	Experimental Treatment	post test
Control group	Pre-test	----------	post test

Population: The population for the study were the bedridden patients in selected hospitals of Pune city.

Sample size

The sample size selected for this study was 40(20 experimental and 20 control). Only those who fulfilled the sampling criteria were selected for the study.

Sampling technique

In this study, non-probability purposive technique was used.

Sampling criteria

The following criteria are set to select samples.

Inclusion Criteria

1. All bedridden patients
2. Bedridden patients admitted in ICU, HDU, Medicine, Surgery and Orthopedic wards.
3. Age group between 20-80years.

Exclusion criteria

1. Patients who had skin lesions, burns and fractured ribs.
2. Patients with decubitus ulcer.

Data Collection Technique and tool

The data was collected from the patients by using observation check list to assess signs and symptoms of decubitus ulcer. Demographic data consisted of persona ldata (age in years and body built) and clinical data (diagnosis and bedridden days) Observation check list consisted of 13 pressure points of supine position, right lateral and left lateral position(i.e.occiput, scapula, spinousprocess, sacrum, heel, ear. iliaccrest, greater trochanter and malleolus) and eight signs and symptoms of decubitus ulcer are assessed (i.e. redness, blister, peeling of skin, ulcer, firm skin, pain and tenderness, warm skin and edema) were assessed.

RESULTS

Description of sample according to personal data

Table 1 shows that in experimental group, 50% of the bed ridden patients had age 61-80 years, 45% of them had age 41-60 years and 5% of them had age 20-40 years. In control group, 55% of the bed ridden patients had age 61-80 years, 30% of them had age 41-60 years and 15% of them had age 20-40 years.

Table no 1 Description of samples according to personal data in terms of frequency and percentage in experimental group and control group.
N=20+20

Personal data	Control Group		Experimental Group	
	Freq	%	Freq	%
Age				
20-40 years	3	15%	1	5%
41-60 years	6	30%	9	45%
61-80 years	11	**55%**	10	**50%**
Body Built				
Thin	5	25%	6	30%
Normal	15	**75%**	13	**65%**
Overweight	0	0%	1	5%

In experimental group, 65% of them had normal body built, 30% of them had thin body built and 5% of them were overweight.

In control group, 75% of them had normal body built and 25% of them had thin body built.

Assessment of the pressure points for decubitus ulcer among bedridden patients before olive oil massage in control group and experimental group

Table 2 Frequency and percentage showing score of decubitus ulcer among bed ridden patients before olive oil massage in control group and experimental group.
N=20+20

Sl.no	Score	Control Group		Experimental Group	
		Freq	%	Freq	%
1	No ulcer (Score=0)	16	**80%**	11	**55%**
2	Mild chance (Score 1-35)	4	20%	9	45%
3	Moderate chance (Score 36-70)	0	0%	0	0%
4	Severe Chance (Score >70)	0	0%	0	0%

Above table 2 shows that before olive oil massage,majority of 80% of the bedridden patients from control group did not had ulcer and majority 55% of the bedridden patients from experimental group did not had ulcer(score 1-35).

Day 1 to day 7 assessment of pressure points for decubitus ulcer among bedridden patients after olive oil massage in experimental group

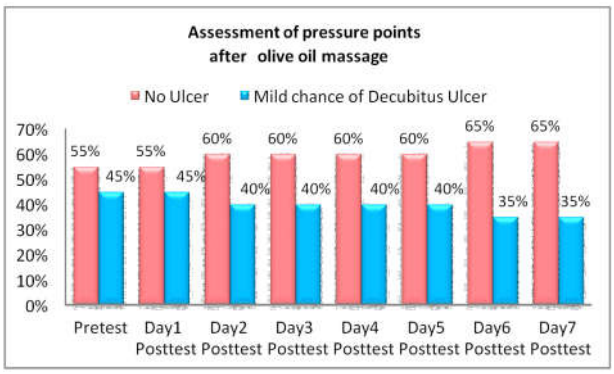

Figure 1 Bargraph showing decubitus ulcer score in experimental group

55% of the bedridden patients from experimental group did not have ulcer which remained same till day 1 post test. On day 2 post test, 60% of them did not have ulcer which remained same

till day 5 post test. On day 6 post test, 65% of them did not have ulcer which remained same over day 7 post test. This indicates that the chance of decubitus ulcer was well controlled in experimental group due to olive oil massage.

Day 1 to day 7 assessment of pressure points for decubitus ulcer among bedridden patients in control group

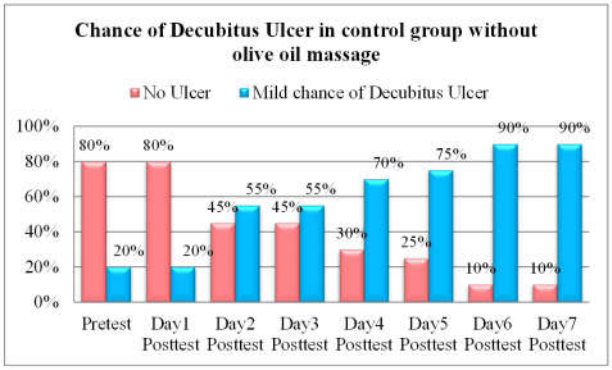

Figure 2 Bar graph showing decubitus ulcer score in control group

Majority 80% of the bedridden patients from control group did not have ulcer which remain same till day 1 post test. On day2 post test,55% of them had mild ulcer which remained same till day 3 post test. On day4 post test, 70% of them had mild chance of ulcer. On day5 post test, 75% of them had mild chance of ulcer. On day6 post test, 90% of them had mild chance of ulcer which remained same over day 7 post test. This indicates that the chance of decubitus ulcer increased in control group without olive oil massage. Majority 80% of the bedridden patients from control group did not have ulcer which remain same till day 1 post test.

On day2 post test,55% of them had mild ulcer which remained same till day 3 post test. On day4 post test, 70% of them had mild chance of ulcer. On day5 post test, 75% of them had mild chance of ulcer. On day6 post test, 90% of them had mild chance of ulcer which remained same over day 7 post test. This indicates that the chance of decubitus ulcer increased in control group without olive oil massage.

Comparision of pre and post test in control group and experimental group

In pretest, 55% the bedridden patients from experimental group did not had ulcer and 45% of them had mild chance of Decubitus Ulcer (score 1-35), which remained same till day1 posttest. On day 2 posttest, 60% of them did not have ulcer and 40% of them had mild ulcer which remained same till day 5 posttest. On day6 posttest, 65% of them did not had ulcer and35% of them had mild chance of ulcer which remained same over day 7 posttest.

In pretest, majority of 80% the bedridden patients from control group did not had ulcer and 20% of them had mild chance of Decubitus Ulcer (score 1-35) which remained same till day 1 posttest. On day2 posttest, 45% of them did not have ulcer and 55% of them had mild ulcer which remained same till day 3 posttest. On day4 posttest, 30% of them did not have ulcer and 70% of them had mild chance of ulcer. On day5 posttest, 25% of them did not have ulcer and 75% of them had mild chance of ulcer. On day6 posttest, 10% of them did not have ulcer and 90% of them had mild chance of ulcer which remained same over day 7 posttest.

Table no 3comparision of control and experimental group.

Admin	Chance of Decubitus Ulcer	Control Group		Experimental Group	
		Freq	%	Freq	%
Pretest	No ulcer (Score=0)	16	80%	11	55%
	Mild chance (Score 1-35)	4	20%	9	45%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day1 Posttest	No ulcer (Score=0)	16	80%	11	55%
	Mild chance (Score 1-35)	4	20%	9	45%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day2 Posttest	No ulcer (Score=0)	9	45%	12	60%
	Mild chance (Score 1-35)	11	55%	8	40%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day3 Posttest	No ulcer (Score=0)	9	45%	12	60%
	Mild chance (Score 1-35)	11	55%	8	40%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day4 Posttest	No ulcer (Score=0)	6	30%	12	60%
	Mild chance (Score 1-35)	14	70%	8	40%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day5 Posttest	No ulcer (Score=0)	5	25%	12	60%
	Mild chance (Score 1-35)	15	75%	8	40%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day6 Posttest	No ulcer (Score=0)	2	10%	13	65%
	Mild chance (Score 1-35)	18	90%	7	35%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%
Day7 Posttest	No ulcer (Score=0)	2	10%	13	65%
	Mild chance (Score 1-35)	18	90%	7	35%
	Moderate chance (Score 36-70)	0	0%	0	0%
	Severe Chance (Score >70)	0	0%	0	0%

This indicates that the chance of decubitus ulcer increased in control group without olive oil massage and that the chance of decubitus ulcer was well controlled in experimental group due to olive oil massage.

Comparision of pre and post score (day 1 and day 7)in control and experimental group.

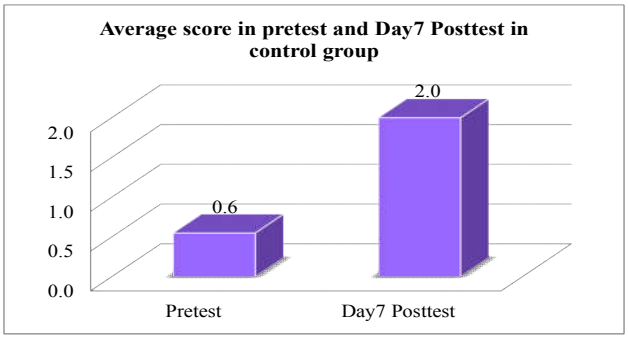

Figure 3 Bargraph showing day 1 and day 7 score in control group.

Researcher applied paired t-test for comparison of pretest and day 7 posttest scores of control group. Average score in pretest was 0.6 which increased to 2 in day 7 posttest without olive oil massage. T-value for this comparison was 7.3 with 19 degrees of freedom. Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. Thus,score of decubitus ulcer increased significantly without olive oil massage.

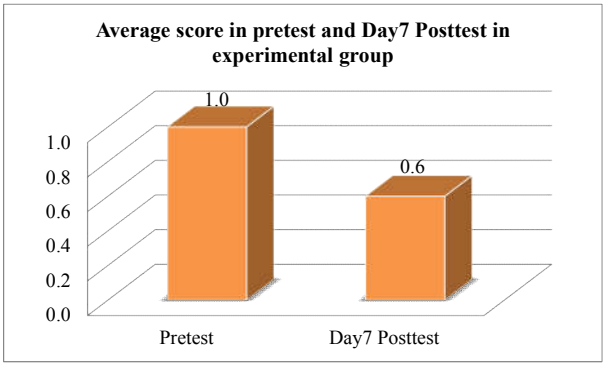

Figure 4 Bargraph showing day 1 and day 7 score in experimental group.

Researcher applied paired t-test for comparision of pretest and day 7 posttest scores of experimental group. Average score in pretest was 1 which reduced to 0.6 in day 7 posttest without further increase after olive oil massage. T-value for this comparison was 2.6 with 19 degrees of freedom. Corresponding p-value was 0.008, which is small (less than 0.05), so, the null hypothesis is rejected. Thus, Olive oil massage is proved to be significantly effective in reducing decubitus ulcer.

Association of pressure points for decubitus ulcer with demographic variables in experimental group

P values are larger (greater than 0.05) .so none of the demographic variables was found to have significant association with the pressure points for decubitus ulcer among bed ridden patients in experimental group.

DISCUSSION

The findings of the study was discussed with the objectives and hypothesis stated. The present study was undertaken to assess the effectiveness of olive oil massage on prevention of decubitus ulcer among bedridden patients in selected hospitals of Pune city. Researcher applied paired t-test for comparison of pretest and day 7 posttest scores of experimental group. Average score in pretest was 1 which reduced to 0.6 in day 7 posttest without further increase after olive oil massage. T-value for this comparison was 2.6 with 19 degrees of freedom. Corresponding p-value was 0.008, which is small (less than 0.05), the null hypothesis is rejected.

Also, Researcher applied paired t-test for comparison of pretest and day 7 posttest scores of control group. Average score in pretest was 0.6 which increased to 2 in day 7 posttest without olive oil massage. T-value for this comparison was 7.3 with 19 degrees of freedom. Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. Decubitus ulcer increased significantly without olive oil massage.

A similar study conducted by Zahra Abbas Ali Madadi *et al*, (2015) on "the effect of topical olive oil on prevention of bedsore in intensive care units patients".60 samples were selected by simple random sampling technique in interventional group and control group. For three weeks, the control group had received routine skin care and experimental group receive tropical olive oil in addition to the routine care. In his study,five patients (16%) who received routine care plus topical olive oil had developed bedsore after an average of 18.73 ± 5.36 days and twelve patients (40%) who received routine care only had developed bedsore after an average of 15.46 ± 7.40 days. The risks of developing bedsores between two groups were statistically significant (P=0.03). Thus, the study has revealed potential effects of topical olive oil to prevent bedsores in I.C.U. patients.[4]

A study conducted by Naomi Tupper (June 20, 2012) to investigate and evaluate the effectiveness of extra virgin olive oil in the prevention of pressure ulcers. The study found that the fatty acids present in extra virgin olive oil encourage regeneration of the skin, in addition to increasing its hydration, elasticity and strength. The oil was also found to reduce skin breakdown and therefore offer protection to areas of skin that were subjected to long periods of friction or pressure, in patients who were confined to wheelchairs or bedridden.[5]

CONCLUSION

The study revealed that olive oil massage was effective on prevention of decubitus ulcer among bedridden patients admitted in selected hospital of pune city.

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