

“Efficacy of aloe vera dressing in management of decubitus ulcer among bedridden patients”

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Introduction: Pressure ulcer is a continuing major health problem worldwide. The development of pressure ulcer wound is more prone to those patients who are confined to bed for long periods, Pressure ulcers represent a major burden of sickness and reduced quality of life for patients and their caregivers. Pressure ulcer also known as bedsores which usually occur over a bony prominence due to long-term pressure, or pressure along with friction. The most common sites for developing pressure ulcer are the sacrum, coccyx, heels, and hips, and least common sites include the elbows, knees, ankles, back of shoulders, or the back of the cranium. Pressure ulcers occur due to pressure which completely or partially obstruct blood flow to the soft tissue. Pressure ulcers most commonly develop in person who are not moving about or on chronic bedrest. The aim of the study was to assess efficacy of aloe vera dressing in management of decubitus ulcer among bedridden patients.

Need for study:-

Early wound healing is very important for patient's suffering from the pressure ulcers. When pressure ulcer occurs, the length of hospital stay and overall cost of treatment increase, and treatment of pressure ulcers become more costly, than prevention, when an ulcer develops, the increased cost of nursing care alone is estimated as 50%.

Statement of problem: An Experimental study on “Efficacy of aloe vera dressing in management of decubitus ulcer among bedridden patients admitted in selected hospitals at Jaipur”

OBJECTIVES:

- To assess the decubitus ulcer among the bedridden patients in experimental and control group.

- To determine the effectiveness of aloe vera gel in management of decubitus ulcer among bedridden patients
- To compare management of decubitus ulcer among the bedridden patients in the control and experimental group
- To find out the association between management of decubitus ulcer with selected demographic variables

Hypothesis:-

H1: The Aloe Vera Gel dressing will have a significant effect in healing the pressure ulcers.

H2: There will be significant association between healing of pressure ulcers and selected socio-demographic variables.

Material and Methods:

In this study, the quantitative research approach was used, the investigation aims at evaluating the efficacy of aloe vera dressing in management of decubitus ulcer among bedridden patients.

Research Design:-The research design was a pre-experimental one group pre-test and post-test design.

Population:-The population was comprised of decubitus ulcer patients admitted in selected hospitals.

Sample size:-10 bedridden patients diagnosed with decubitus ulcer patients from selected hospital Jaipur.

Sampling technique:-Non -random, convenient sampling technique

Criteria for selection of sample:-

Inclusion criteria

- Age group above 30 years
- Subjects of both sex
- Bedridden patients with pressure ulcers.

Exclusion criteria

- Subjects who are suffering from chronic illnesses like diabetes mellitus, tuberculosis, anemia, vascular diseases, septicemia and mental diseases.
- Subjects who had been previously treated with other topical medicine or antibiotics.

Development And Description Of Tool:- Data collection tools are the procedures or instruments used by the researcher to observe or measure key variables in the research problem.

Validation Of Tool:-

Standardised tool e.i.BeteJenesen Scale for pressure ulcer healing assessment was used in this study.

Reliability Of The Tool:-

Reliability denotes degree of consistency. The reliability of the tool was assessed by using inter rater method and its correlation coefficient r -value is 0.84. This correlation coefficient is high

and it is good tool for assessing effectiveness of Aloe vera gel dressing in healing of pressure ulcers among subjects.

Data collection:-Pre-experimental, one group pre-test post-test research design ($O_1 \times O_2$) was used. Total 10 patients of decubitus ulcer wound were taken by convenience sampling technique from February, 2018 to April 30, 2018 in selected hospital Jaipur.

Result: The findings are presented under the following sections

Section 1:

Distribution of samples according to their selected demographic variables in Experimental and Control group.

Section 2:

Assessment of pre-test level of pressure ulcer score in both Experimental and Control group.

Section 3:

Comparison of pressure ulcer score after intervention in Experimental and Control group.

Section 4:

Effectiveness of aloe vera gel in healing of pressure ulcers in Experimental and Control group.

Section 5:

Association of the level of pressure ulcer in Experimental and Control groups with selected socio-demographic variables.

Section I:

Table 1: Frequency and percentage distribution of Socio-demographic characteristics of bedridden patients with decubitus ulcer in experimental and control group

N= 20

S.No.	Socio-demographic variables	Experimental group		Control group		Test value
		f	%	f	%	
1.	Age (Years)					$\chi^2=2.33$ p=0.50
	21-30	1	20	1	20	
	31-40	1	20	3	60	
	41-50	2	40	1	20	
	Above 50	1	20	0		
2.	Sex					$\chi^2=0.00$ p=1.00
	Male	2	40	2	40	
	Female	3	60	3	60	
3.	Education					$\chi^2=1.33$ p=0.85
	Illiterate	1	20	1	20	
	Primary	0	00	1	20	
	Matric	1	20	1	20	
	S. Secondary	2	40	1	20	
	Graduation & above	1	20	1	20	
4.	Occupation					$\chi^2=2.50$ p=0.11
	Skilled worker	5	100	3	60	
	Unskilled worker	0		2	40	
5.	Familyincome (Rs/ Month)					$\chi^2=3.00$ p=0.22
	Less than 5000	0	00	0	00	
	5,000-10,000	2	40	0	00	
	10,000- 20,000	1	20	3	60	
	More than 20000	2	40	2	40	
6.	Area of living					$\chi^2=0.47$ p=0.49
	Rural	4	80	3	60	
	Urban	1	20	2	40	
7.	Length of hospital stay					$\chi^2=2.00$ p=0.36
	10 days	1	20	0	00	
	11- 20 days	2	40	1	20	
	21-30 days	2	40	4	80	
	More than 30 days	0	00	0	00	
8.	Associated diseases					$\chi^2=1.33$ p=0.51
	Diabetes	2	40	1	20	
	Hypertension	0	00	1	20	
	Anemia	0	00	0	00	
	Fracture/ others	3	60	3	60	

N= 10

S.No.	Socio-demographic variables	Experimental group		Control group		Test value
		f	%	f	%	
9.	Body build					$\chi^2=2.53$ p=0.28
	Thin	0	00	2	40	
	Moderate	2	40	1	20	
	Obese	3	60	2	40	

Table 1 represents that samples in both experimental and control group were homogenous as matching was done.

Regarding the age, majority of the subjects 9(30%) were between 30-40 years in Experimental group and majority of subjects 10(33.3%) were between 40-50years in Control group.

Considering the sex majority of subjects 22(73.7%) were males in Experimental group and majority of subjects 19(63.3%) were males in Control group.

As for the marital status, majority of subjects 20(66.7%) were married in Experimental group and most of the subjects 16(53.3%) were married in Control group.

In considering the religion, majority of subjects 20(66.7%) were Hindus in Experimental group and majority of subjects 21(70%) were Hindus in Control group.

Regarding the type of family majority of subjects 17(56.7%) belonged to Joint family in Experimental group and most of the subjects 17(56.7%) belonged

to Joint family in Control group.

As for the Educational status, majority of subjects 11(36.7%) were illiterates in Experimental group and most of the subjects 13(43.3%) had completed elementary education in Control group.

Considering the occupation, majority of subjects 17(56.7%) are private employees in Experimental group and most of the subjects 16(53.3%) are private employees in Control group.

Regarding the marital status, majority of subjects 20(66.7%) were married in Experimental group and most of the subjects 16(53.3%) were married in Control group.

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As for the income, majority of subjects 15(50%) get a monthly income of Rs.2000-5000 in Experimental group and most of the subjects 14(46.7%) get a monthly income of Rs.2000-5000 in Control group.

Considering the area of residence, majority of subjects 16(53.3%) belonged to Urban area in Experimental group whereas most of the subjects 18(60%) belonged to Rural area in Control group.

Regarding the dietary pattern, majority of subjects 16(53.3%) used to have protein rich type of diets in Experimental group and most of the subjects 15(50%) used to have protein rich type of diets in Control

Section II:

Objective 1: To assess the decubitus ulcer of the bedridden patients in experimental and control group.

Table 2: Frequency and percentage distribution of bedridden patients in experimental and control group as per pre-test status of decubitus ulcer

N= 10

Status of decubitus ulcer		Decubitus ulcer score	Experimental group (n=5)		Control group (n=5)	
			f	%	f	%
Pre-test	Tissue Health	Less than 9	0	00	0	00
	Healed	9 - 12	0	0.0	0	00
	Wound regeneration	13 - 59	5	100	5	100
	Wound degeneration	60 and above	0	00	0	00

Maximum score = 65; Minimum score = 0

Table 2 shows that in pre-test, 100% of bedridden patients with decubitus ulcer were in wound regeneration status in both experimental and control group.

Objective 2: To reassess the decubitus ulcer of bedridden patients

Table 3: Frequency and percentage distribution of bedridden patients in experimental and control group as per post-test status of decubitus ulcer

N= 10

Status of decubitus ulcer		Decubitus ulcer score	Experimental group (n=5)		Control group (n=5)	
			f	%	f	%
Post-test	Tissue Health	Less than 9	0	0	0	00
	Healed	9 – 12	2	40	0	00
	Wound regeneration	13 – 59	3	60	5	100
	Wound degeneration	60 and above	0	00	0	00

Maximum score = 65; Minimum score = 0

Table 3 illustrates that in post-test, in experimental group 40% of bedridden patients with decubitus ulcer were in healed and 60% were in wound regeneration status where as in control group 100% were in wound regeneration status.

Section III

Objective 3: To compare the decubitus ulcer status of the bedridden patients with between experimental and control group.

Table 4: Comparison of the decubitus ulcer status of the bedridden patients between experimental and control group.

N= 10

Status of decubitus ulcer	Decubitus ulcer score	Experimental group(n=5)		Control group(n=5)		Test value	
		F	%	f	%		
Pre-test	Tissue Health	Less than 9	0	00	0	00	-
	Healed	9 - 12	0	00	0	00	
	Wound regeneration	13 - 59	5	100	5	100	
	Wound degeneration	60 and above	0	00	0	00	
Post-test	Tissue Health	Less than 9	0	0	0	00	$\chi^2=2.50$ p=0.11
	Healed	9 - 12	2	40	0	00	
	Wound regeneration	13 - 59	3	60	5	100	
	Wound degeneration	60 and above	0	00	0	00	

Table 4 demonstrates that in pre-test as well as in post-test there was no statistically significant difference in the status of decubitus ulcer among bedridden patients between experimental and control group.

There was a significant difference between pre test and post test score of decubitus ulcer wound healing at p=0.001 level. **Conclusion:** The result from the study reveals that alovera gel is effective in decubitus ulcer wound healing.

Keywords: Decubitus ulcer, Alovera gel, Bed ridden patients

References

1. https://en.wikipedia.org/wiki/Pressure_ulcer

Pressure ulcer affects more than 3.1 million adults worldwide annually .Ghanee R, Gavami H.

Pressure ulcer in intensive care unit. Bimonthly J UrmiaNurs Midwifery Fac. 2010;8(2):90–103.

2 <https://patient.info/doctor/pressure-ulcers-pro>

3. Tatiana V. Boyko,^{1,2} Michael T. Longaker,^{1,3} and George P. Yang.¹

Review of the Current Management of Pressure Ulcers. *Adv Wound Care*. 2018 Feb 1; 7(2): 57–

67. 4. Patient risk factors for pressure ulcer development: Systematic review

International Journal of Nursing Studies

Volume 50, Issue 7, July 2013, Pages 974-1003

5 Vanderwee K, Clark M, Dealey C, et al. Pressure ulcer prevalence in Europe: a pilot study. *J EvalClinPract*. 2007;13(2):227–235.

6 Jiang Q, Li X, Qu X, et al. The incidence, risk factors and characteristics of pressure ulcers in hospitalized patients in China. *Int J ClinExpPathol*. 2014;7(5):2587–2594.

7. Bredeesen IM, Bjørø K, Gunningberg L, et al. Patient and organisational variables associated with pressure ulcer prevalence in hospital settings: A multilevel analysis. *BMJ Open*. 2015;5:8.

7. v.s. chauhanat.el. The prevalence of pressure ulcers in hospitalized patients in a university hospital in India. Article in *Journal of Wound Care* 14(1):36-7 .

8. https://www.researchgate.net/publication/276142125_Pressure_Ulcer_and_Patient_Characteristics_A_Point_Prevalence_Study_in_a_tertiary_Hospital_of_India_based_on_the_Europeaalce9.

Jamal A.S. Qaddumi¹, Pressure Ulcers Prevalence and Potential Risk Factors Among Intensive Care Unit Patients in Governmental Hospitals in Palestine: A Cross-sectional Study Year: 2019

Volume: 12 <https://openpublichealthjournal.com/VOLUME/12/PAGE/121/FULLTEXT/#r6>

10. Jiang Q, Li X, Qu X, et al. The incidence, risk factors and characteristics of pressure ulcers in hospitalized patients in China. *Int J ClinExpPathol* 2014; 7(5): 2587-94

11. Moore Z, Johanssen E, van Etten M. A review of PU prevalence and incidence across Scandinavia, Iceland and Ireland (Part I). *J Wound Care* 2013; 22(7): 361-362, 364-

12. Ensieh Ramezanpour¹, Amir Emami Zeydi¹, Incidence and risk factors of pressure ulcers among general surgery patients
Journal of nursing and midwifery sciences, year 2018 volume :5 issue:4 page 159-164
13. Pressure ulcer summit 2018: An interdisciplinary approach to improve our understanding of the risk of pressure-induced tissue damage

Lisa J. Gould MD, PhD <https://onlinelibrary.wiley.com/doi/abs/10.1111/wrr.12730>

14. Biji M Sankaran¹, Santam Chakraborty², Burden and outcomes of pressure ulcers in cancer patients receiving the Kerala model of home based palliative care in India: Results from a prospective observational study ,Year : 2015 | *indian journal of palliative care* Volume : 21 | Issue : 2 | Page : 152-157

15. <https://www.medrxiv.org/content/10.1101/19007237v1>

16. The Burden of Pressure Ulcers in Spain. Soldevilla Agreda JJ , Torra I Bou JE ,

Wounds : a Compendium of Clinical Research and Practice [01 Jul 2007, 19(7):201-206]