

A Comparative Study to Assess the Effectiveness of Sumag Dressing Versus Glycerin Dressing on Patients with Thrombophlebitis

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Abstract:- A comparative study to assess the effectiveness of Sumag dressing versus glycerin dressing on patients with thrombophlebitis. Objectives for the study were effectiveness of Glycerin dressing and Sumag dressing on thrombophlebitis patients.

Simple random sampling technique was adopted to select 60 patients with thrombophlebitis. Visual Infusion phlebitis scale and demographic checklist was used for data collection. Experimental approach and comparative experimental design as adopted for this study. The major findings of the study were, in this study the baseline Mean \pm SD score of thrombophlebitis level pretest in 1st group (Sumag group) was 3.166 ± 0.698 and after Sumag dressing, the post-test mean \pm SD was 0.4 ± 0.498 . The t value for pre-test post-test is 30.066 in Sumag group. The p value in Sumag group is <0.01 . This shows that there was gradual reduction in phlebitis mean score and SD score after intervention and the t score is significant. Hence the topical application of Sumag is effective on IV induced thrombophlebitis.

I. INTRODUCTION

Intravenous (IV) medication administration refers to the process of giving medication directly into a patient's vein. All medication administration carries certain risks, but IV therapy adds another level of complexity. Even when the nurse follows the 'five rights' she can go wrong if the practices do not meet the standard of care for intravenous therapy¹.

The risk of phlebitis increased after the fourth day of cannula insertion and the major risk factors for causing phlebitis are intravenous antibiotics, female gender and cannulation 48 hours or more than that and catheter material. The risk can be reduced when experienced nurses on intravenous therapy team inserts intravenous catheters and provide close surveillance of infusion sites.

Although venous catheters provide necessary vascular access, they are associated with some risks and complications that can have impact on the clinical status and outcome of the patient. Studies had shown that twenty percent (20%) to eighty percent (80%) of patients treated by peripheral intravenous catheters are susceptible to some form of complication. The most common complication of Thrombophlebitis is associated with peripheral intravenous catheters (PIVCs) and accounts for considerable iatrogenic morbidity. The incidence of phlebitis ranges from ten percent (10%) to ninety percent (90%) of peripheral intravenous catheterization.

II. MATERIALS AND METHODS

Quantitative Research approach was used and Quasi-experimental (Randomized Pre-Test Post-Test design) was selected to evaluate the effectiveness sumag vs glycerine dressing.

The study was conducted in Sharda Hospitals in Greater Noida that is 1000 bedded hospital. Simple random sampling technique used in this study and the total sample size was 60 in this study.

III. RESULT

- *Findings according to the objectives of study*
- **Section 1-** Analysis of demographic Characteristics of the respondents (Subjects)
- **Section 2-** Analysis of effectiveness of Sumag dressing on reducing thrombophlebitis.
- **Section 3-** Analysis of effectiveness Glycerin dressing on reducing thrombophlebitis.
- **Section 4-** Analysis of effectiveness of Sumag dressing versus glycerin dressing among thrombophlebitis patient.
- **Section 1:** Finding related to socio demographic variables of subjects in Sumag and Glycerine group

Table 1: Frequency and percentage distribution of subjects according to socio *demographic variables in Sumag and Glycerin group

n=30=30=60				
Socio Demographic Variables	Sumag Dressing Group		Glycerin Dressing Group	
	F	%	F	%
Age				
18-30	5	16.7	7	23.3
31-40	12	40.0	12	40.0
41-50	7	23.3	7	23.3
51-60	6	20.0	4	13.3
Gender				
Male	16	53.3	14	46.7
Female	14	46.7	16	53.3
Size Of I.V. Cannula In Gz				
18.00	9	30.0	12	40.0
20.00	21	70.0	18	60.0
No. Of Days Stayed In Hospital				
1-5 Days	4	13.3	4	13.3
6-10days	16	53.3	18	60.0
11-15days	8	26.7	4	13.3
16-20days	2	6.7	4	13.3
Site Of Cannula				
Cephalic Vein	11	36.7	9	30
Dorsal Metacarpal Vein	12	40.0	12	40.0
Basilic Vein	7	23.3	9	30.0
Duration Of Cannula				
3-4days	14	46.7	15	50.0
5-6days	16	53.3	15	50.0

Maximum samples in sumag and glycerin dressing were 31-40 yrs of age n= 12(40%) For gender n=16(53.3%) males and 14 (46.7) females in Sumag Group where as in Glycerin group n=14(46.7%) are males and n=30 (53.3%) were females. For size of IV cannula in gz the majority of the patient n=21(70%) in Sumag group and n=18(60%) in glycerine group. For duration in hospital Sumag group for (6-10) days n=16(53.3%), and n=18(60%) in glycerin group, for site of cannula in sumag group and glycerin group n=12 (40%) was having cannula at Dorsal Metacarpal .

Duration of cannula for sumag group n=16 (53.3%) was having cannula for 5-6 days Where as in glycerin group n=15 (50%) was having cannula for 5-6 days of duration

- **Section 2-** Analysis of effectiveness of Sumag dressing on reducing thrombophlebitis.

Table 2 Effectiveness of Sumag dressing on reducing thrombophlebitis among 1st group

	Level Of Phlebitis Sumag Group		t value	P value
	Mean	SD		
Baseline pretest	3.166	0.698	30.066	<0.01
Post-test	0.400	0.498		

Table 2 Shows: The Baseline Mean and SD score of pretest thrombophlebitis level in 1st group (Sumag group) was 3.166 ±0.698 and after Sumag dressing, the post-test means and SD was 0.4 ±.498. The t value for pre-test post-test is 30.066in Sumag group. The p value in Sumag group is <0.001. This shows that there was gradual reduction in phlebitis mean score and SD score after intervention and the t score is significant. Hence the topical application of Sumag is effective on IV induced thrombophlebitis.

• **Section 3-** Analysis of effectiveness Glycerin dressing on reducing thrombophlebitis.

Table 3 Effectiveness of Glycerin dressing on reducing thrombophlebitis among 2nd group {Glycerin dressing}

	Level of Phlebitis Glycerin Group		t value	P value
	Mean	SD		
Baseline pretest	3.067	0.691	16.089	<0.001
Post-test	1.433	0.6260		

Table 3: shows the Baseline Mean and SD score of pretest thrombophlebitis level in 2nd group [glycerin group] was 3.067 ±0.698 and after glycerin dressing as intervention, the post - test mean and SD was 1.433±0.6260. The t value for pretest and posttest is t value is 16.089. The p value in glycerin group is <0.001. This shows that there was gradual reduction in phlebitis mean score and SD score after intervention and the t is significant. Hence the topical application glycerin is effective on IV induced thrombophlebitis.

• **Section 4-** Analysis of effectiveness of Sumag dressing versus glycerin dressing among thrombophlebitis patient.

Table 4 Effectiveness of Sumag dressing versus glycerin dressing among thrombophlebitis patient. Unpaired t test

	Group 1 st Sumag Group (Mean and Standard deviation)		Group 2 nd Glycerine group (Mean and Standard deviation)		t value	P Value
	Mean	Standard Deviation	Mean	Standard deviation		
	Pre-test score	3.166	0.698	3.067		
Post test score	0.4	0.498	1.433	0.626	7.073	
Mean difference	2.766		1.634			

Table 4 Shows the Baseline Mean pretest thrombophlebitis level score and SD in 1st group Sumag group was 3.166 ±0.698 and after Sumag dressing, the post-test mean and SD post-test mean and SD was 0.4 ±.498. The t value for pretest posttest is t value is 30.066. The p value in Sumag group is <0.001. This shows that there was gradual reduction in phlebitis mean score and SD score after intervention and the t score is significant. Hence the topical application of Sumag is effective on IV induced thrombophlebitis.

In Glycerin group the baseline Mean and SD of pretest score of thrombophlebitis level in 2nd group [glycerin group] was 3.067 ±0.698 and after glycerin dressing as intervention, the post - test mean and SD was 1.433±0.6260. The t value for pretest and posttest is t value is 16.089. The p value in glycerine group is <0.001. This shows that there was gradual reduction in phlebitis mean score and SD score after intervention and the t is significant. Hence the topical application glycerin is effective on IV induced thrombophlebitis

On comparison the mean difference is high in Sumag group (2.766) compare to glycerine group (1.634). This shows that there was gradual reduction in the level of phlebitis score after Sumag dressing as an intervention to the 1st group.

IV. CONCLUSION

Based on the analysis of the findings of the study, the following inferences were drawn. There was a significant reduction in the level of phlebitis among patients after topical application of Sumag and glycerine. Thus, it proved to be an effective treatment for thrombophlebitis. Therefore,

this intervention should be promoted as an institutional policy and implemented as a routine care for all patients following IV induced thrombophlebitis for effective management.

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