



A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF WARM FOMENTATION VERSUS GLYCERINE MAGNESIUM SULFATE APPLICATION AMONG THROMBOPHLEBITIS PATIENTS

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ABSTRACT Today in hospital setting, intravenous therapy, has become major component of patient care, intravascular lines are used for purpose of varying from monitoring pressures, administering drugs and fluids. A common problem encountered during IV therapy is the phlebitis, i.e. the inflammation of the venous wall near the point of entry of the cannula into the veins. It is often due to patient movement and disruption of vein at the site of insertion of the cannula. The patients who are on cytotoxic drugs, hyper osmolar agents and vaso active drugs are more prone to phlebitis. Present work done by using the quantitative research approach by using quasi experimental pre and posttest research design was used to assess the effectiveness of warm fomentation versus glycerin magnesium sulfate application among thrombophlebitis patient. The collected data was organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics based on the objectives of the study and Effectiveness of intervention will be analyzed by using paired 't' test and independent 't' test. The study result shows that A among Group-I(warm fomentation) on 3rd day of intervention 14 (47%) thrombophlebitis patient had observable stage of first sign of phlebitis, and 15(50%) having early stage of phlebitis, 1 (3%) patient had medium stage of phlebitis. Among Group-II (glycerin magnesium sulfate) posttest on 3rd day 19 (63.34%) thrombophlebitis patient had IV site appears healthy, were as 10[33.33%] had observable stage of first sign of phlebitis, and 1[3.33%] had early stage of phlebitis. The obtained "t" value of 20, was highly significant at P<0.01 level. It indicates that the glycerin magnesium sulfate was more effective than the warm fomentation on thrombophlebitis patients on second day of intervention.

KEYWORDS : Thrombophlebitis patient, glycerin magnesium sulfate, warm fomentation

INTRODUCTION

Today in hospital setting, intravenous therapy, has become major component of patient care, Intravascular lines are used for purpose of varying from monitoring pressures, administering drugs and fluids.. A common problem encountered during IV therapy is the phlebitis, ie the inflammation of the venous wall near the point of entry of the cannula into the veins. It is often due to patient movement and disruption of vein at the site of insertion of the cannula [1,2]. The patients who are on cytotoxic drugs, hyper osmolar agents and vaso active drugs are more prone to phlebitis. Intravenous catheterization is one of the most widespread procedures in health care environments. Close to 90% of all hospitalized patients receive intravenous catheters (IVs). The number of patients in hospitals receiving I.V therapy is 80%. Intravenous catheters (or IVs) are a very important part of medical treatment for acute illnesses, cancer, surgery, anesthesia, and trauma, allowing medications to reach as quickly and effectively as possible, via the bloodstream. Catheter related infections, particularly catheter related blood stream infections, are associated with increased morbidity, mortality and prolonged hospitalization.

The indication for venous access should be weighed against its risk of complications. The commonest complication associated with a peripheral venous catheter is thrombophlebitis [3,4]. This causes patient discomfort as removal of the cannula and insertion of a new catheter at a different site may be required. If left untreated the inflammation could later turn into an infection. This will clearly consume more healthcare resources and put patients into unnecessary jeopardy

The authors would like to note that the grading scale suggested by Bhandari et al. was originally used to grade thrombophlebitis among children. There may be a difference in its application for grading thrombophlebitis among adult patients. However, we were unsuccessful in identifying a more appropriate grading scale when this research was conducted and was compelled to use the grading by Bhandari et al [5,6].

Jackson phlebitis scale [2006] were able to identify another grading scale from the Infusion Nurses Society during the preparation of this manuscript. This scale grades thrombophlebitis based on the development of symptoms; a higher grade of thrombophlebitis is designated as more signs develop. Erythema at access site with or without pain is designated as Grade 1. Pain at access site with erythema and/or edema is Grade 2. Grade 3 is pain at access site with palpable venous cord, Grade 4 pain erythema, edema, streak formation with venous palpable.

Although many strategies to reduce the phlebitis, strategies of control measures like hand washing, patient skin preparation, wearing gloves and aprons, establishing a clean environment, using sterile equipment, disposing of contaminated or soil equipment and linen properly, safe disposable of waste [7-9].

OBJECTIVES OF THE STUDY

- To assess the degree of thrombophlebitis among calculation patients
- To determine the effectiveness of glycerin magnesium sulfate application among patients with thrombophlebitis
- To evaluate the effectiveness of Warm fomentation among patients with thrombophlebitis
- To compare the effectiveness of warm fomentation and Glycerin Magnesium Sulfate application among patients with thrombophlebitis.
- To associate the effectiveness of warm fomentation and Glycerin Magnesium Sulfate application among patients with thrombophlebitis with selected socio demographic variables.

Hypothesis

Null hypothesis

- **Ho:** There will not statistically significant difference between the effectiveness of warm fomentation and glycerin magnesium sulfate application among patients with thrombophlebitis

Research hypothesis

- **H₁:** There will be statistically significant effect of warm fomentation among patients with thrombophlebitis [10,11].
- **H₂:** There will be statistically significant effect of magnesium-sulfate application among patients with thrombophlebitis.
- **H₃:** There will be statistically significant difference between the warm fomentation and glycerin magnesium sulfate.
- **H₄:** There will be statistically significant association between selected demographic variable and post-test thrombophlebitis score.

DETAILED RESEARCH PLAN

Research Approach: Quantitative Approach.

Research Design: quasi experimental pre and posttest research design

Research Setting: The setting of the study was conducted in Narayana Medical College Hospital, Nellore

Sampling Technique: Non probability convenience sampling techniques was adopted for selection of the subjects.

Sample Size: The sample size of the study is 60 , (Group –I 30, Group –II 30)

Data collection procedure

In group –I Application of warm fomentation was applied to 30 samples i.e one piece of guaze pad from boiling water , twice a day continuously 2 days between 8-8.30 am and 2- 2.30pm. Another group for application of glycerin magnesium sulfate to 30 samples with early and medium stage of thrombophlebitis i.e 10gms of mgso4 added with 30 ml of glycerin was applied. for advanced stage of thrombophlebitis i.e 20gms of mgso4 was added with 60ml of glycerin was applied. Intervention was a given twice a day continuously 2 days between 8-8.30 am and 2- 2.30pm. Post test was conducted on 3rd day after intervention by using the same scale to assess the thrombophlebitis [1].

Description of the tool

With the help of extensive review from various text books, nursing experts, journals and websites ,the tool is developed to assess the effectiveness of warm fomentation glycerin magnesium sulfate on thrombophlebitis with IV calculated patients in narayana medical college hospital at Nellore

PART-I It deals with the demographic variables of the samples like Age,sex,Religion, socio economic history etc.

PART –II JACKSON PHLEBITIS SCALE [2006]

- a. intravenous record. It consists of eight criteria such as location of canula, size, colour, number of needle pricks, numbe of canula used, type of fluid, causes of phlebitis, type of drugs. \
- b. modified jackson phlebitis scale

Degree Of Grade	Description
Grade 0	NO Symptoms
Grade 1	Erythma at access site with or without pain.
Grade 2	Pain at access site witherythma and or Edema.
Grade 3	Pain at access site with erythma and or edema , streak formation, slightly palpable of the venous cord
Grade 4	Pain at access site with erythma and or edema, streak formation,palpable the venous cord.

RESULTS AND DISCUSSION

Description of demographic variables of among thrombophlebitis patients

Group: 1 (warm fomentation)

- 5(17%) of observable stage of phlebitis among IV calculated patients were age between 51-60 years
- 8(27%) of early stage of phlebitis among IV calculated patients were males
- 13(43.33%) of early stage of phlebitis among IV calculated patients were annual income Rs 4001-6500
- 14(47%) of early stage of phlebitis among IV calculated patients were Hindus
- 8(27%) of early stage of phlebitis among IV calculated patients occupation were coolie
- 7(23.33%) of observable stage of phlebitis among IV calculated patients education were illiterate
- 12(40%)of observable stage of phlebitis among IV calculated patients were married
- 16(53.33%)of observable stage and early stage of phlebitis among IV calculated patients were thin built
- 12(40%) observable stage of phlebitis among IV calculated patients were diabetic people
- 11(37%) observable stage of phlebitis among IV calculated patients were followed by medical treatment
- 22(73%) having wrist site of phlebitis in both groups

Group: II (glycerine MGSO4)

- 12(40%) of observable stage of phlebitis among IV calculated patients were age between 21 -30Y and >60 years
- 8(27%) of early stage of phlebitis among IV calculated patients were males
- 9(30%) of early stage of phlebitis among IV calculated patients were annual income Rs 4001-6500
- 19(63.33%) of early stage of phlebitis among IV calculated

patients were Hindus

- 10(33.33%) of early stage of phlebitis among IV calculated patients occupation were coolie
- 8(27%) of observable stage of phlebitis among IV calculated patients education were illiterate
- 16(53.33%)of observable stage of phlebitis among IV calculated patients education were married
- 8(27%)of observable stage and early stage of phlebitis among IV calculated patients were moderate built
- 12(40%) observable stage of phlebitis among IV calculated patients were hypertension people
- 10(33.33%) observable stage of phlebitis among IV calculated patients were followed by medical treatment
- 19(63.33%)of observable stage of phlebitis among IV calculated patients were having secondary infection

Table 2:Effectiveness of Warm fomentation versus glycerin magnesium sulfate application among patients with thrombophlebitis on 3rdday after intervention among Group-I and Group-II.

A among Group-I on 3rd day of intervention 14 (47%) thrombophlebitis patient had observable stage of first sign of phlebitis , and 15(50%) having early stage of phlebitis, 1(3%) patient had medium stage of phlebitis.

Among Group-II on 3rd day of intervention 19 (63.34%) thrombophlebitis patient had IV site appears healthy, were as 10[33.33%] had observable stage of first sign of phlebitis, and 1[3.33%] had early stage of phlebitis.

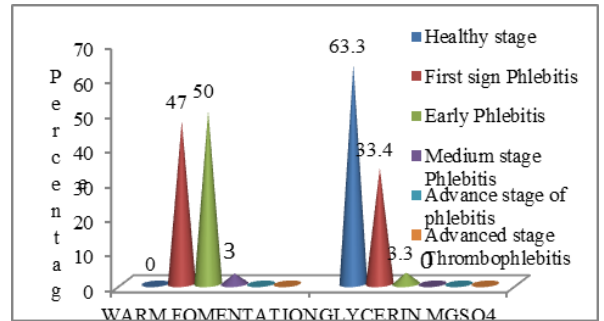


Table 3:Comparison of mean and standard deviation of warm fomentation versus glycerin MGSO4 application among thrombophlebitis patients on 3rd day of intervention.

Groups	Mean	Standard deviation	Independent 't' Value
Group –I	1.56	0.54	Cal = 6.07 Tab = 2.576 S *** At p< .005
Group-II	0.33	0.52	

Represent The obtained "t" value of 6.07, was highly significant at P< .005 level. It indicates that the glycerin magnesium sulfate was more effective than the warm fomentation on thrombophlebitis patients on 3rd day of intervention.

CONCLUSION

The conclusion drawn from this study was that there was a significant difference between the warm fomentation versus glycerin mgso4 application on thrombophlebitis among iv calculated patients.

A among Group-I(warm fomentation) on 3rd day of intervention 14 (47%) thrombophlebitis patient had observable stage of first sign of phlebitis , and 15(50%) having early stage of phlebitis, 1(3%) patient had medium stage of phlebitis. Among Group-II (glycerin magnesium sulfate)on 3rd day of intervention 19 (63.34%) thrombophlebitis patient had IV site appears healthy, were as 10[33.33%] had observable stage of first sign of phlebitis, and 1[3.33%] had early stage of phlebitis. The obtained "t" value of 20, was highly significant at P<0.01 level. It indicates that the glycerin magnesium sulfate was more effective than the warm fomentation on thrombophlebitis patients on second day of intervention.

IMPLICATIONS OF THE STUDY

The findings of the study showed that there is a significant relationship between the warm fomentation versus glycerin mgso4 application on thrombophlebitis.

Nursing education

glycerin mgso4 application on thrombophlebitis among iv calculated patients should become as a practice in the hospital setup. The student nurses should have the adequate knowledge on the importance of glycerin mgso4 application on thrombophlebitis. The health care personnel should give more attention on training the students to practice this intervention.

Nursing practice

Nurses should extent the knowledge on modified Jackson phlebitis scale.

Nursing Administration

In administration level glycerin mgso4 application on thrombophlebitis should be implemented in our nursing practice. They should take initiative to conduct continue nursing education to update the current information and to improve the knowledge of health care personnel.

Nursing Research

Nursing care is a task oriented and fragmented care, but it demands to look after the comprehensive care of the client in a scientific way.

LIMITATIONS

1. The study was only confined to the thrombophlebitis patients.
2. The observation were limited to certain time period
3. The observation made by the investigator only

RECOMMENDATIONS

On the basis of present study, the following suggestions are formulated for future study. A similar study can be conducted for large number of sample.

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