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A study to assess the knowledge and practice regarding prevention of Deep Vein Thrombosis among staff nurses working in selected tertiary care hospitals of Maharashtra state

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Abstract

This study was carried out to assess the knowledge and practice regarding prevention of Deep Vein Thrombosis among staff nurses working in selected tertiary care hospitals of Maharashtra state. A Cross sectional survey approach was used to assess the knowledge and practice regarding prevention of Deep Vein Thrombosis among staff nurses. A Descriptive Research Design was adopted by the investigator to assess the socio demographic profile as well as knowledge and practice of staff nurses. The investigator used a purposive sampling technique to select the study participants. To collect data, a Self-Administered Questionnaire was used among nurses. Further, the collected data were analyzed in accordance with the objectives of the research question. Majority 27(45%) of staff nurses had average knowledge and 8 (30%) had poor knowledge. The data with respect to the practice of staff nurses was collected using self-reported practice checklist, and results showed that majority had good (around 60%) practice on prevention of DVT.

Keywords: Knowledge, practice, Deep Vein Thrombosis, staff nurses, tertiary care hospital

Introduction

Hospitalized patients frequently experience deep venous thrombosis (DVT), a serious and potentially preventable medical condition that raises patients' morbidity and mortality. Venous thromboembolism (VTE), which has grown to be a significant public health concern for the population, includes both deep vein thrombosis (DVT) and pulmonary emboli (PE) [1].

According to CDC, venous thromboembolism is the fifth most reason meant for unplanned hospital readmissions of patients following surgery, and originating from this, 70% in the case of hospital- acquired venous thromboembolism are avoidable through preventive steps [2].

Venous thrombus makes up about almost 10% of most hospital fatalities, and also fifty percent of VTE occurrences are hospital- acquired. Appropriate precautionary practice (e. g., pharmacological and mechanical prophylaxis) can substantially reduce the occurrence of VTE simply by 70% for the medical and in surgical patients [3].

Deep venous thrombosis is regarded as the third most common cardiovascular disease condition following myocardial infarction and stroke. It is a growing public health issue with 26. 4% of recurrence after diagnosis. This adds to the burden of the hospital and raises the cost of patient care [4].

Preventing deep venous thrombosis (DVT) involves giving hospitalized patients pharmacological, mechanical, and general care (early mobilization, exercise, and hydration). These have the potential to significantly lower the risk of DVT in both surgical and medical patients [5].

In the hospital care setting, nurses are essential for evaluating and identifying risk factors for deep venous thrombosis in patients. The burden of DVT and its complications can be reduced with the help of adequate knowledge, appropriate patient care, graduated compression stockings, the administration of the appropriate anticoagulation agent with careful assessment, and nurse risk factor monitoring [6].

According to studies, nurses' knowledge and practice in preventing deep venous thromboembolism may increase hospitalization and ultimately result in subpar health care outcomes [7].

Deep Vein Thrombosis (DVT) prevention is not possible despite advancements in medical care, the availability of efficient methods, and accepted standards. Therefore, the purpose of this study was to evaluate the actual knowledge and practice gap among nurses.

Materials and Methods

A Descriptive Research Design was adopted by the investigator to assess the socio demographic profile as well as knowledge and practice of staff nurses. The study comprised of 60 staff nurses working medical ward, surgical ward, emergency, ICU, and Gyn-obs wards in the selected hospital. The investigator used a purposive sampling technique to draw 60 study participants who met the inclusive criteria. A Self-Administered Questionnaire was used to assess the knowledge of staff nurses regarding DVT. The data with respect to the practice of staff nurses was collected using self-reported practice checklist. The content validity of the tool was established in consultation with guide and 12 experts from the field of Medical Surgical Nursing. Reliability coefficient of the tool was calculated using Karl Pearson correlation coefficient method. The

items were coded and the reliability was calculated. Formal permission was obtained from authority concerned.

Analysis and interpretation is based on the objectives of the study. The analysis was done with the help of descriptive statistics.

Results

Section I. Distribution of socio-demographic variables of nurses

Table 1: Frequency and percentage distribution of socio-demographic variables and Work-Related Characteristics of nurses N=60

Sr. No	Variables	Category	Frequency	Percent
1	Age	≤25 years	23	38.3%
		26–30 years	20	33.3%
		31–35 years	10	16.7%
		≥36 years	7	11.7%
2	Gender	Male	21	35%
		Female	39	65%
3	Marital status	Unmarried	27	45%
		Married	30	50%
		Others*	3	5%
4	Educational status	Post graduate	4	6.6%
		Degree	17	28.3%
		Diploma	39	65%
5	Area of work	Medical	14	23.3%
		Surgical	19	31.7%
		ICU	10	16.7%
		Emergency	10	16.7%
		Obs-Gynec	7	11.7%
6	Work experience (in years)	≤5 years	22	36.7%
		6–10 years	22	36.7%
		≥11 years	16	26.7%

Section II: Assessment of knowledge regarding prevention of DVT among nurses

Table 2: Percentage distribution of nurses with respect to their knowledge regarding prevention of DVT N=60

Level of knowledge	Frequency	Percentage
Poor	18	30%
Average	27	45%
Good	10	16.7%
Very good	5	8.3%
Excellent	0	0%
Overall	60	100.0%

Percentage distribution of nurses according to their level of knowledge shows that out of 60 nurses, majority 27(45%) of them had average knowledge, 18 (30%) had poor knowledge, 10(16.7%) had good knowledge and 5(8.3%) had very good knowledge. However, none of the nurses had excellent knowledge on DVT and its prevention.

Section III. Assessment of practice of nurses regarding prevention of DVT

Table 2: Nurses' practice on DVT prevention N=60

Item. No	Statements on prevention of DVT	Always N	Always %	Sometimes N	Sometimes %	Never N	Never %
1.	Provides information about risks and prevention of DVT to patients and/or relatives	40	66.7%	18	30%	2	3.3%
2.	Encourages patients to do foot and leg exercises by themselves or with the help of relatives	38	63.3%	23	38.3%	1	1.7%
3.	Early ambulation of patients after surgery is encouraged	40	66.7%	16	26.7%	4	6.7%
4.	Regular and periodic assessment of DVT risks among patients	35	58.3%	22	36.7%	2	3.3%
5.	Administration of anticoagulants as prescribed	36	60%	22	36.7%	3	5%
6.	Regular monitoring of the side effects of the anticoagulants	37	61.7%	20	33.3%	3	5%
7.	Educating the patients regarding anticoagulants	35	58.3%	22	36.7%	3	5%
8.	Educating the patients to avoid injury	37	61.7%	20	33.3%	2	3.3%
9.	Encouraging patients to elevate legs as advised	40	66.7%	19	31.7%	1	1.7%
10.	Educating the patients regarding sufficient fluid intake	38	63.3%	18	30%	4	6.7%

10 practice-based questions regarding prevention of DVT were used to assess the practice of staff nurses. Out of 60 nurses around 60% of them practiced all the 10 measures mentioned in the practice based questions always. However,

the around 30% of the nurses practiced the preventive measures sometimes only. The results also revealed that around 5% of nurses never practiced the preventive measures.

Discussion

The study was conducted to assess knowledge and practice of nurses on DVT prevention, and the results of the study revealed that out of 60 nurses, majority 27(45%) of them had average knowledge, 18 (30%) had poor knowledge, 10(16.7%) had good knowledge and 5(8.3%) had very good knowledge. However, none of the nurses had excellent knowledge on DVT and its prevention.

This finding are more or less similar with a study results of a study conducted by K. Moly (2016) where majority of staff nurses were having average (58%) to poor (42%).

The use of a similar study population (staff nurse, study unit, and study design) may account for this similarity, despite the differences in socioeconomic status.

Conclusion

The results of the current study showed that nurses had inadequate knowledge of risk factors and deep vein thrombosis prevention, as well as unsatisfactory practices. Lack of clinical practice guidelines and inadequate service level training in the hospital may have the caused it.

Conflict of Interest

Not available

Financial Support

Not available

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