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A study to assess the knowledge regarding inotropic drug calculation among intensive care unit staff nurses in Nellore

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Abstract

Congestive Heart Failure is a common condition that occurs when the heart cannot pump enough blood to meet tissue needs for oxygen and nutrients. Inotropes play an important role in avoiding cardiogenic shock. The compensative mechanism itself increases the workload of the heart and they are limited to extend and duration. In this condition drug therapy is aimed to improve cardiac output by using inotropes and other supportive measures. The study aimed to assess the knowledge regarding inotropic drug calculation among intensive care unit staff nurses in, Nellore. Quantitative research approach and non experimental descriptive research design was used for the study. A non probability convenience sampling technique was adopted for selecting the samples. The sample size of the study was 100 staff nurses in Nellore. The structured questionnaire was used to assess the knowledge regarding inotropic drug calculation among intensive care unit staff nurses in, Nellore. Descriptive and inferential statistics were used to analyze and interpret the data. The study concluded that majority of staff nurses had inadequate knowledge regarding inotropic drug calculation.

Keywords: Knowledge, ionotropic drug calculation, staff nurses

Introduction

The term inotropic state is most commonly used in reference to various drugs that affect the strength of contraction of heart muscle. An inotrope is an agent that alters the force or energy of muscular contractions. Both positive and negative inotropic drugs are used in the management of various cardiovascular conditions. The choice of agent depends largely on specific pharmacological effect of individual agent with respect to the condition. Inotropic drugs start the failing heart by increasing cardiac output, relieving pulmonary congestion and improving blood pressure and tissue perfusion. It affects the strength of cardiac muscle contraction. Negative inotropic action decreases the force of contraction, positive inotropic action increases it. Common inotropes used in ICU are Dopamine, Dobutamine, Adrenaline, Noradrenaline, Isoprenaline and Milirinone. Nursing staff providing care to patient receiving inotropic drugs on a medical or a surgical unit must have an adequate knowledge about its administration. All inotropic can cause a marked increase in heart rate and tachy arrhythmias. They should preferably be given through a central venous line than periferal infusion. Infusion of some drug cause extravasation and can cause severe local tissue damage. The drug may be diluted in saline or dextrose before administration. All drugs must be labeled accurately with name, diluents and rate

Statement of the problem

“A study to assess the knowledge regarding inotropic drug calculation among intensive care unit staff nurses in Nellore”.

Objectives

- To assess the level of knowledge regarding inotropic drug calculation among intensive care unit staff nurses.
- To find out the association between the level of knowledge regarding inotropic drug calculation among intensive care staff nurses with their selected socio demographic variables.

Material and Methods

This cross sectional descriptive study was carried out to assess the knowledge regarding inotropic drug calculation among intensive care staff nurses. After obtaining ethical clearance, 100 ICU staff nurses were selected by using non probability convenience sampling technique. Informed consent was obtained from the samples. The data was collected from samples by using structured questionnaire and responses were documented. Statistical analysis was performed by using descriptive and inferential statistics.

Criteria for sample selection

Inclusion criteria

- The study includes both male and female staff nurses
- Staff who are available at the time of data collection

Exclusion criteria

- Staff who are not willing to participate in the study

- Staff who are freshly joined

Description of the tool

The tool developed was developed with the help of extensive review from various text book, journals, website, discussion and guidance from experts.

The tool was divided into two parts.

Part-A: It deals with socio demographic variables like age, gender, educational qualification, marital status, experience, income and source of information.

Part-B: It deals with structured questionnaire to assess the knowledge regarding inotropic drug calculation among ICU staff nurses.

Plan for data analysis

Table 1: The data was analyzed in terms of objectives of the study using descriptive and inferential statistics.

S. No	Data analysis	Method	Remarks
1	Descriptive Statistics	Frequency, and Percentage distribution, Mean and Standard Deviation	*Distribution of socio demographic variables To assess the knowledge regarding inotropic drug calculation among ICU staff nurses.
2	Inferential statistics	Chi-Square test	* To find out the association between knowledge regarding inotropic drug calculation among ICU staff nurses with their selected socio demographic variables

Results

The data was organized and presented under the following Headings.

Section – I

Frequency and percentage distribution of socio demographic variables of ICU staff nurses.

Section – II

Frequency and percentage distribution of level of knowledge regarding inotropic drug calculation among ICU staff nurses.

Section – III

Mean and standard deviation of knowledge regarding inotropic drug calculation

Section – IV

Association between the level of knowledge regarding inotropic drug calculation among intensive care unit staff nurses with their selected socio demographic variables.

Section-I

Frequency and percentage distribution of socio demographic variables of ICU staff nurses.

- In relation to age, 94(94%) were between 22-25 years.
- In context to gender, 96(96%) were females.
- With respect to educational qualification, 87(87%) studied BSc nursing.
- In relation to income, 47(47%) were earning >Rs. 9001-11001 per month.
- In relation to year of experience, 52(52%) were having 1-3 years of experience.
- In relation to source of information, 42(42%) were getting information from mass media.

Section-II

Percentage distribution of level of knowledge on ionotropic drug calculation among ICU staff nurses.

Section-III

Table 2: Mean and standard deviation of level of knowledge. (N=100)

Category	Mean	Standard deviation
Nursing students	23.31	4.558

Section- IV

Association between level of knowledge and socio demographic variables of ICU staff nurses.

- The study finding reveals that there is a significance association between the level of knowledge and socio demographic variables such as income and years of experience.
- There is no significance association between the level of knowledge and socio demographic variable such as age, gender, education, and source of information and CNE program.

Conclusion

The study concluded that majority of ICU staff nurses had inadequate knowledge on. inotropic drug calculation.

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