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Knowledge regarding anticoagulation therapy among patients attending cardiac clinics

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Abstract

Anticoagulants, which are considered “high alert medications,” can often lead to adverse drug events in the inpatient and outpatient healthcare setting if not managed appropriately. High alert medications refer to drugs that have an increased risk of causing significant harm when used in error. Many of anticoagulation-associated adverse effects result from medication errors, suggesting they are preventable. A non-experimental descriptive study was conducted to assess the knowledge regarding anticoagulation therapy among patients attending cardiac clinics of Pune city. The aim of the present study was to assess the knowledge regarding anticoagulation therapy, to find out the association of knowledge with selected demographic variables. The research study was based on “Health Belief Model”. A qualitative research approach was used. The design adopted for this study was non-experimental descriptive survey method. The total sample size was 200 cardiac patients. The tool used for data collection were demographic data which consists of socio-demographic data and clinical characteristics, assessment of the knowledge regarding anticoagulation therapy that is general knowledge on anticoagulation therapy and knowledge on anticoagulation drugs (warfarin, dabigatran, rivaroxaban, apixaban). The data collected was analysed by using descriptive and inferential statistics. Major findings of the study are 70% of the cardiac patients had average knowledge, 10% had good knowledge and 20% of them had poor knowledge regarding cardiac anticoagulation therapy. There is no statistically significant association between the knowledge with selected demographic variables. Hence the researcher concluded that there is great need for improving the knowledge among the patients. Researcher also recommends that Health education should be given at cardiac clinics for the patients in order to improve the knowledge and the patients should be encourage to gain knowledge through information booklet, television, peer group and internet.

Keywords: Knowledge, anticoagulation therapy, cardiac patients

Introduction

Anticoagulant drugs decrease capacity of blood to clot. Heparin and warfarin are commonly used anti-coagulants. Aspirin is an antiplatelet medicine also works as an anti-coagulant. It diminishes the ability of the blood to clot.¹ Blood clots comprises of a series of complex chemical processes. It initiates a chemical process that changes the surface of the platelets and becomes sticky. Platelets seals the site of bleeding and clot formation is initiated.² Some indications for anticoagulant therapy are as follows: atrial fibrillation coronary artery disease deep vein thrombosis ischemic stroke hypercoagulable states myocardial infarction pulmonary embolism restenosis from stents etc.³ In India, the Global Burden of cardiovascular diseases is estimated as 272 / 100,000 people. Oral anticoagulants are even referred as vitamin K antagonists and are generally prescribed in patients suffering from mechanical heart valves, atrial fibrillation, venous thromboembolism, myocardial infarction, acute ischemic stroke.⁴ The cardiovascular disorder is a growing & leading reason of mortality in India. Assessment of current patient’ knowledge is necessary to increase the standard of anticoagulation therapy. Patients who received anticoagulation therapy in the OPD setting & on long term basis needs a close monitoring because it retains a high risk of bleeding too. The level of patient’s knowledge on anticoagulation therapy can improve adverse drug reaction and other possible complications associated with the therapy.⁵

Objectives of the study

1. To assess the knowledge regarding anticoagulation therapy among patients attending cardiac clinics.
2. To find out the association of knowledge with selected demographic variables.

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Materials and Methods**Study Design:** Non experimental descriptive survey method**Study area:** Selected cardiac clinics of Pune city**Sample size:** 200**Time frame:** 6 Months**Sample selection criteria****Sampling technique:** Non probability purposive sampling technique**Population:** Cardiac patients**Inclusion Criteria****Cardiac Patients who are**

- Above 18 years of age.
- Receiving oral anticoagulation therapy.
- Attending cardiac OPDs for treatment.

Exclusion Criteria**Cardiac patients who are**

- On intravenous anticoagulation therapy.
- Critically ill.
- Mentally challenged.

Description of Data Collection Tool**The tool consisted of 2 main sections****Section I:** (Demographic data)**Part A:** Socio-Demographic data**Part B:** Clinical characteristics**Section II:** (Self structured knowledge questionnaires)**Part A:** General knowledge on anticoagulation therapy**Part B:** Knowledge on anticoagulant drug

Each right answer carries one mark and incorrect responses are scored 0 (zero). A response key is prepared.

Level of knowledge Score Range

- Good 13 to 18
- Average 7to 12
- Poor 0to 6

Method of data collection

- Researcher has obtained approval from appropriate review boards to conduct the study.
- Administrative permission was taken from selected hospital authority to conduct the study.
- Researcher duly explains the purpose of the study.
- Only the samples who had signed the consent form are included in this study.

Confidentiality of the participants was maintained strictly.

Result and Discussion**Section I:** Description of the samples according to their demographic variables**Table 1:** Description of samples based on their demographic variables in terms of frequency and percentages

Sr. No	Demographic variables	Frequency (f)	Percentage (%)
1.	Age (in years)		
	18 – 25	1	0.5
	26 – 40	30	15
	41 – 60	125	62.5
	>60	44	22
2.	Gender		
	Male	141	70.5
	Female	59	29.5
3.	Educational Status		
	Primary school	17	8.5
	High school	37	18.5
	Higher secondary	105	52.5
	Graduate	36	18
	Post graduate	5	2.5
	Vocational courses	0	0
	Illiterate	0	0
	Any other	0	0
4.	Occupation		
	Unemployed	31	15.5
	Farming	24	12
	Private services	74	37
	Govt. Service	24	12
	Self employed	21	10.5
	Labourer / daily waged worker	2	1
	Home maker	24	12
5.	Religion		
	Hindu	126	63
	Christian	46	23
	Muslim	10	5
	Others	18	9
6.	Marital status		
	Single	21	10.5

	Married	173	86.5
	Divorced	4	2
	Separated	0	0
	Widow/Widower	2	1
7.	Area of residence		
	Urban	92	46
	Rural	51	25.5
	Sub urban	57	28.5

Table 2: Description of samples based on their clinical characteristics in terms of frequency and percentages

Sr. No	Clinical characteristics	Frequency (f)	Percentage (%)
1.	Disease suffering from		
	AWMI	28	14
	Angina	20	10
	Atrial fibrillation	17	8.5
	Arrhythmia	21	10.5
	Heart valve disease	12	6
	CCF	8	4
	Aortic stenosis	16	8
	Mechanical prosthetic heart valves	8	4
	Cardiomyopathy	15	7.5
	MI	55	27.5
2.	Duration of Disorder		
	< 1 year	94	47
	1 – 5 years	81	40.5
	>5 years	25	12.5
3.	Duration of anticoagulant consumption		
	< 1 year	117	58.5
	1 – 5 years	68	34
	>5 years	15	7.5
4.	Education/ information on anticoagulation received		
	Yes	166	83
	No	34	17
5.	If yes, the source of education/information		
	Health care provider	123	61.5
	Mass media	6	3
	Relatives	19	9.5
	Friends	18	9
	Any other	0	0
	Not applicable	34	17
6.	Family history of any cardiac disorder		
	Yes	48	24
	No	152	76
7.	Regular investigation carried out as advised by the physician		
	Yes	185	92.5
	No	15	7.5
8.	Regular treatment taken as advised by the physician		
	Yes	184	92
	No	46	8

Section II: Findings related to the knowledge score of the cardiac patients regarding anticoagulation therapy.

Table 3: Frequency and percentage distribution of the Knowledge Score of the cardiac patients regarding anticoagulation therapy n=200

Knowledge	Freq (f)	Percentage (%)
Poor (Score 0-6)	40	20
Average (Score 7-12)	140	70
Good (Score 13-18)	20	10

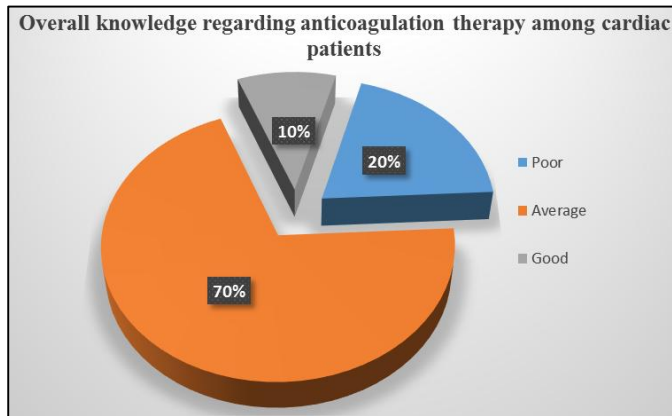


Fig 1: Pie diagram showing distribution of the cardiac patients according to their level of knowledge regarding anticoagulation therapy.

Section III: Findings related to association of knowledge with selected demographic variables. For ascertain the significance of association investigator has decided 0.05 level of significance.

There were no Association between knowledge and demographic variables.

Discussion

The findings of the study was discussed with the objectives and assumption stated. The present study was undertaken to assess the Knowledge Regarding Anticoagulation Therapy among Patients Attending Cardiac Clinics.

A Cross sectional descriptive study entitled “knowledge on oral anticoagulation therapy among valve replacement patients” on 299 patients who underwent valve replacement surgery at Puducherry on 2015 was done. The study showed that 51.1% patients had moderate adequate knowledge, 25.4% & 23.4% of the patients had inadequate knowledge and adequate knowledge regarding usage of anticoagulation therapy respectively.⁶

In the present study, from the analysed data, it is evident that knowledge score of the cardiac patients regarding anticoagulation therapy. The findings show that majority 70% of the cardiac patients had average knowledge, 10% had good knowledge and 20% of them had poor knowledge regarding cardiac anticoagulation therapy.

Association between knowledge with selected demographic variables among cardiac patients. Findings shows that there is no statistically significant association between the knowledge with selected demographic variables as all the table values are more than 0.05.

Recommendations

According to the findings of the study, following recommendations were made,

1. The future studies can be done on longer duration.
2. A study can be conducted to assess the knowledge regarding normal values of cardiac disease indicator.
3. Similar research study can be conducted to assess the effectiveness of anticoagulation drugs versus home remedies.

Conclusion

The aims of these study is to assess the knowledge on anti-coagulation therapy among patients attending cardiac clinics of Pune city. The knowledge was assessed by structured

knowledge questionnaire which has total 18 items. 13 questions were related to anticoagulation therapy in general and 5 questions were related to the specific anticoagulant drug which the patient is receiving. The study suggests that many of the patients are having average and poor knowledge on anticoagulation therapy and there is a need of developing various means to improve the knowledge of the patients.

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