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ASSESSMENT OF SIDE EFFECTS WITH AMIODARONE IN TREATMENT CHARTS OF HOSPITALISED PATIENTS SUFFERING WITH CARDIAC ARRHYTHMIAS

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ABSTRACT

Amiodarone is an anti-arrhythmic medications used to treat and prevent a number of irregular heartbeats. This includes ventricular tachycardia (VT), Ventricular fibrillation (VF), wide complex tachycardia as well as Atrial fibrillation (AF) and proximal supra ventricular tachycardia (PSVT). It can be given by mouth, intravenously, intraosseously. **Materials And Methods: Study method:** This was a prospective observational study conducted for 10 months in a tertiary care hospital. **Study site:** The study was conducted in a 500 bedded tertiary care hospital in intensive care unit. **Study duration:** The study was conducted for nine months (February 2017 – November 2017). **Results:** Out of 216 patients 150 are willing to give information regarding all the demographic details and reasons for usage of Amiodarone, side effects, complications, treatment outcomes and duration of Amiodarone usage was analysed. **Discussions:** Out of 216 patients 150 are male and 66 are female with marital status of 216 (100%) and education level are mostly tertiary of 108 (50%) and nutritional status of average and hygienic conditions of average are taken in study. The reason for using Amiodarone for patients is due to cardiac arrhythmias of 50% and least of ventricular tachycardia of 5.8%. And treatment regimen of patients mainly prescribed was Amiodarone. **Conclusion:** Our study conclude that the patients who are suffering with cardiac arrhythmia are mainly using Amiodarone, there is no effect due to the drug so the physicians should monitor and make the treatment effective with different classes of drugs which are effective for cardiac arrhythmias. So as we are clinical pharmacists we should modify the treatment and make the treatment

regimen effective and advise the patients about the side effects and complications of drugs prescribed.

KEYWORDS: cardiac arrhythmias, ventricular tachycardia (VT), Ventricular fibrillation (VF), Atrial fibrillation (AF) and proximal supra ventricular tachycardia (PSVT).

INTRODUCTION

Cardiac Arrhythmia is a condition in which the heart's normal rhythm is disrupted. The heart may beat too slowly, too quickly or with an irregular rhythm. Most arrhythmias are harmless, but some can be serious and potentially fatal. Disturbed heart rhythms can restrict blood being pumped around the body, which may cause damage to the brain, heart and other organs. Common causes of arrhythmia are stress, caffeine, tobacco, alcohol, diet pills and cough and cold medicines.

Initial symptoms of arrhythmia include: heart palpitations, a skipped beat or a 'fluttering' sensation in the chest. The longer the arrhythmia lasts, the more likely that this condition can affect the way the heart works, causing a range of secondary symptoms.

These include: Fatigue, Blackouts, Dizziness, and Breathlessness, Rapid heartbeat or pounding, Chest pain.

In extreme cases, certain types of arrhythmia can cause sudden cardiac death.

Amiodarone is an antiarrhythmic medication used to treat and prevent a number of types of irregular heartbeats. This includes ventricular tachycardia (VT), ventricular fibrillation (VF), and wide complex tachycardia, as well as atrial fibrillation and paroxysmal supraventricular tachycardia. It can be given by mouth, intravenously or intraosseously. When used by mouth, it can take a few weeks for effects to begin. Common side effects include feeling tired, tremor, nausea, and constipation. As Amiodarone can have serious side effects, it is mainly recommended only for significant ventricular arrhythmias. Serious side effects include lung toxicity such as interstitial pneumonitis, liver problems heart arrhythmias, vision problems, thyroid problems and death. If taken during pregnancy or breastfeeding it can cause problems in the baby. It is a class III anti arrhythmic medication. It works partly by increasing the time before a heart cell can contract again.

Amiodarone was first made in 1961 and came into medical use in 1962 for chest pain believed to be related to the heart. It was pulled from the market in 1967 due to side effects. In 1974 it was found to be useful for arrhythmias and reintroduced. It is on the World Health Organization's List of Essential Medicines, the most effective and safe medicines needed in a health system. It is available as a generic medication.

MATERIALS AND METHODS

Study design: the study was prospective observational study conducted in tertiary care hospital.

Study population: The study was done in the patients of intensive care unit and acute medical care unit.

Study procedure: The study was done by collecting information using patient case sheets, based on the data a questionnaire is prepared. Nearly data of 216 patient were collected which include case history, demographic details, past medical history, laboratory values, and Amiodarone prescribed with their dosage and frequency of cardiac arrhythmias were collected.

Sampling method: All age group between 45 to 60 who are suffering with cardiac arrhythmia and taking Amiodarone as medication are taken for study.

Study duration: The study was conducted for 9 months Feb. 2016 to Oct 2016.

Inclusion criteria

- All the patients suffering with cardiac arrhythmias.
- Patients age above 45- 60.
- Of both sexes.
- Insane minded.
- Who are willing to give information.

Exclusion criteria

- Off sane minded.
- Pregnancy women.
- Suffering with sexual diseases.
- Lack of interest.

- Paediatrics.

Study material

Patient consent form

Consent was collected by using self designed patient consent form and consent was made into three languages English, Telugu, Hindi.

Ethical approval: The study was approval by institutional ethical committee and tertiary care hospital.

Data analysis: A data was analyzed by demographic details reason for admission and frequency as stay in ICU. Prescribe antidotes, severity in conditions. Complications during treatment and survival rate, laboratory values drugs prescribed was analyzed by statistical software's the data was analyzed by using ms – excel and result was given by percentage.

RESULTS

Out of 216 patients 150 are willing to give information regarding all the demographic details and reasons for usage of Amiodarone, side effects, complications, treatment outcomes and duration of Amiodarone was tabled as bellow.

Table 1: Shows demographic details of the patients with percentages.

Demographics	No.of Patients	Frequency (%)
Age		
45 – 50		
50 – 55	24	11
55-60	65	30
Sex	127	59
Male	150	69.5
Female	66	30.5
Marital status	216	100
Married	0	0
Unmarried	43	20
Educational level	65	30
Primary	108	50
Secondary	65	30
Tertiary	108	50
Nutritional status	43	20
Poor	108	50
Average	65	30
Good	43	20
Hygiene conditions		
Average		

Good Excellent		

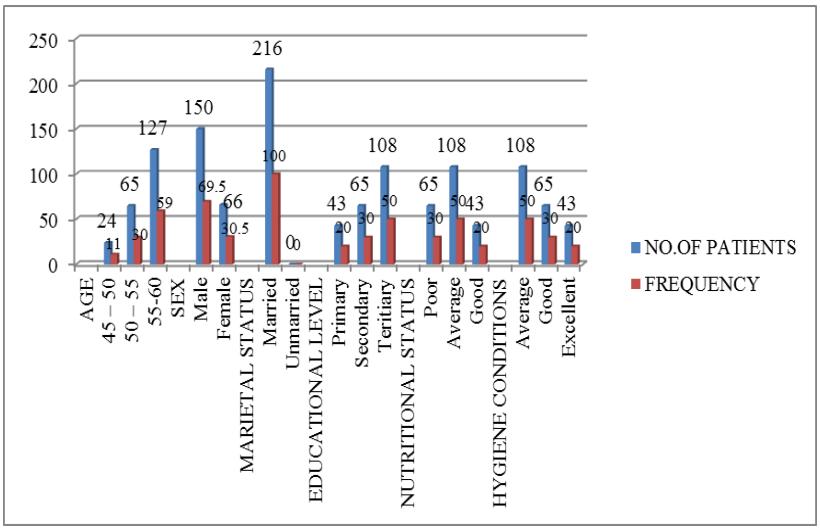


Table 2: Shows the reasons for usage of Amiodarone.

Reasons	No. of Patients	Frequency (%)
Cardiac arrhythimiasis	108	50
Ventricular arrhythimiasis	32	14.7
Atrial fibrillation	25	11.7
Ventricular fibrillation	19	8.8
Wide complex tachycardia	13	5.8
Paroximal supraventricular tachycardia	6	2.9
Ventricular tachycardia	13	5.8

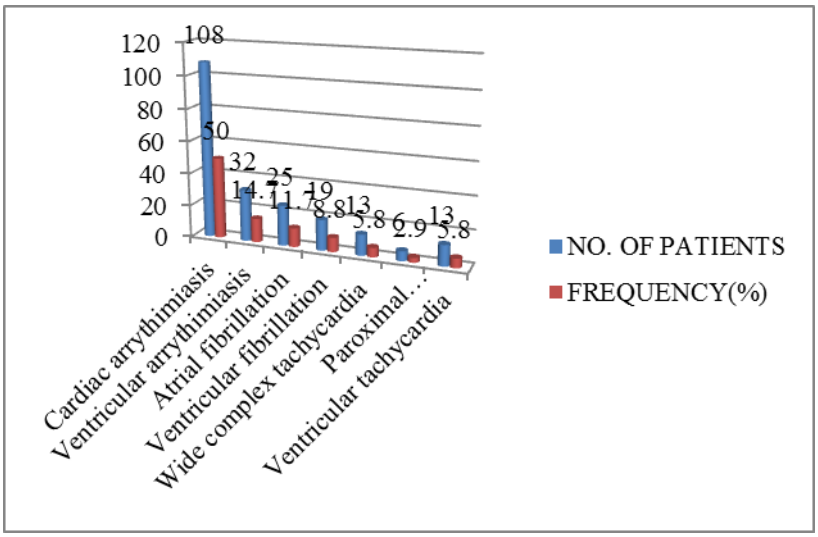


Table 3: Shows the treatment prescribed for the treatment of cardiac arrhythmias.

Drugs	No. of Patients	Frequency (%)
Amiodarone	108	50
Flecainide	25	11.7
Procainamide	6	2.9
Sotalol	19	8.8
Metaprolol	32	14.7
Verapamil	25	11.7

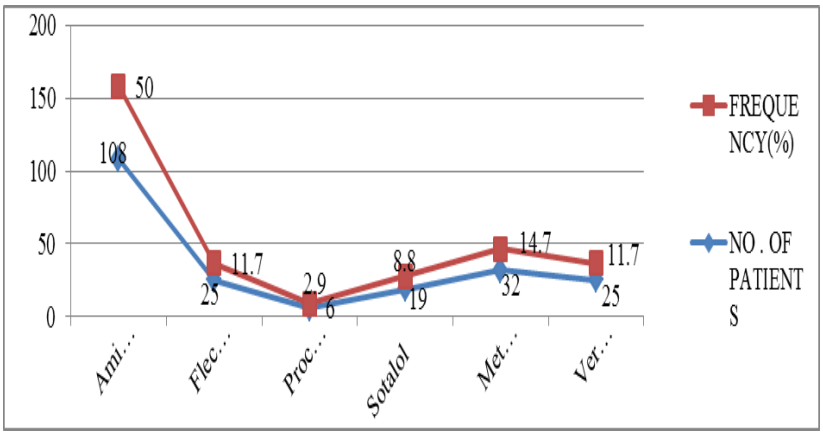


Table 4: Shows the side effects caused during treatment for cardiac arrhythmias with Amiodarone.

Side Effects	No. of Patients	Frequency (%)
Nausea & Vomiting	45	30
Constipation	45	30
Loss of appetite	45	30
Photosensitivity & blue skin pigmentation	14	9
Hypothyroidism	30	20
Sexual problems	14	9
Headache	21	14
Pulmonary toxicity	18	12
Heart block	10	7
Renal failure	8	5

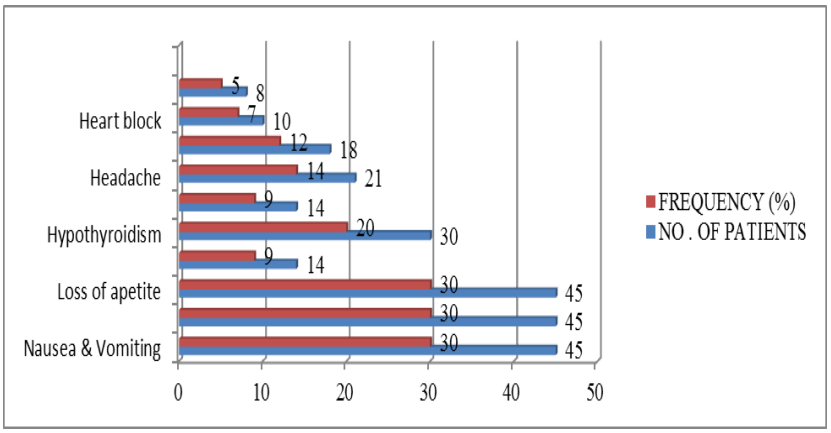


Table 5: Shows the severity of side effects caused b Amiodarone.

Severity	No. of Patients	Frequency (%)
Mild	83	55
Moderate	45	30
Major	15	10
Severe	7	5

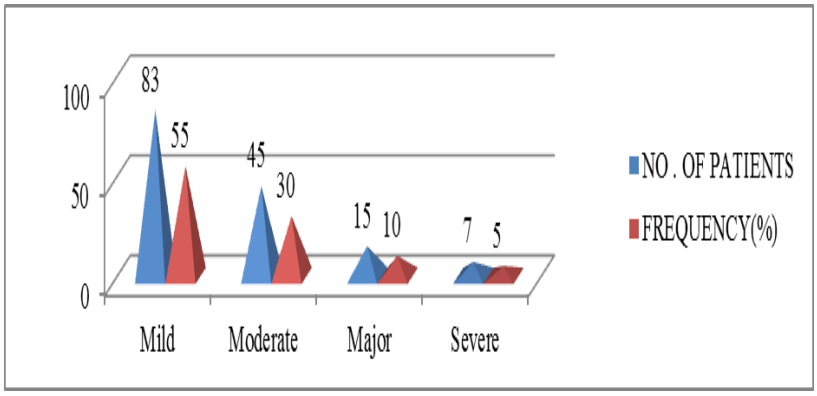


Table 6: Shows the treatment to overcome side effects caused by Amiodarone.

Side effects	Treatment	No. of patients	Frequency (%)
Nausea & Vomiting	Reduce dosage	45	30
Constipation	Colase	45	30
Photosensitivity, blue skin pigmentation	Reduce dosage or use sunburn	14	9
Hypothyroidism	Levothyroxine	30	20
Bradycardia	Stop or insert pace maker	21	14
Pulmonary embolism	Discontinue or start corticosteroid therapy	18	12

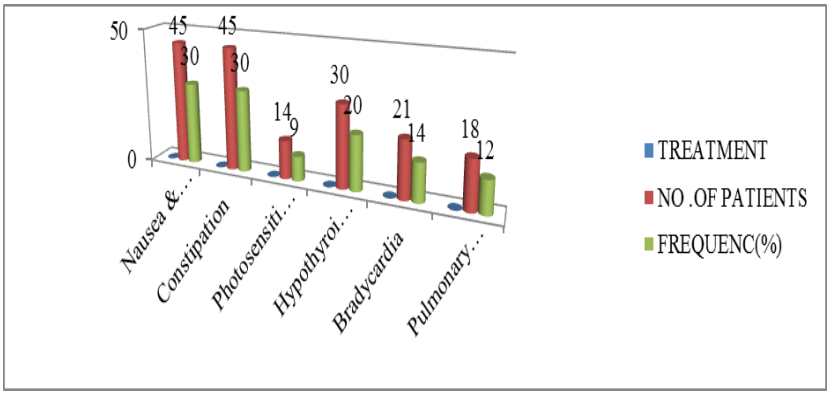


Table 7: Shows the duration of Amiodarone used by the patients.

Duration	No. of Patients	Frequency (%)
1 year	75	50
>3 years	44	29.5
< 5 years	31	20.5

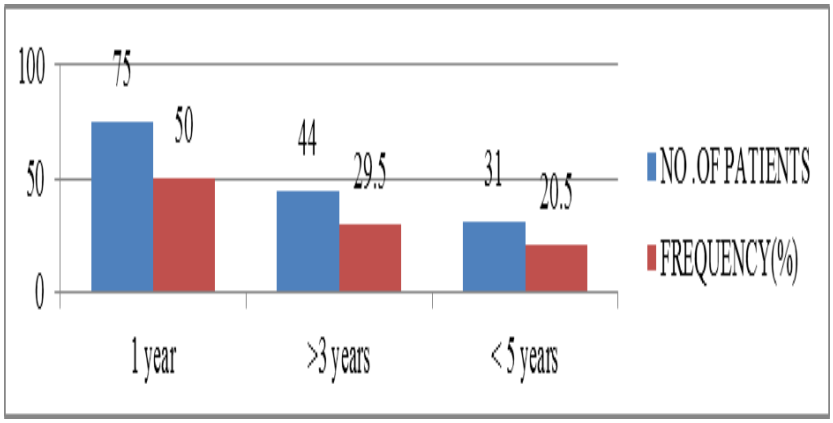


TABLE 8: Shows the dose of Amiodarone.

Dose	No. of Patients	Frequency (%)
100 mg	75	50
200 mg	44	29.5
400 mg	31	20.5

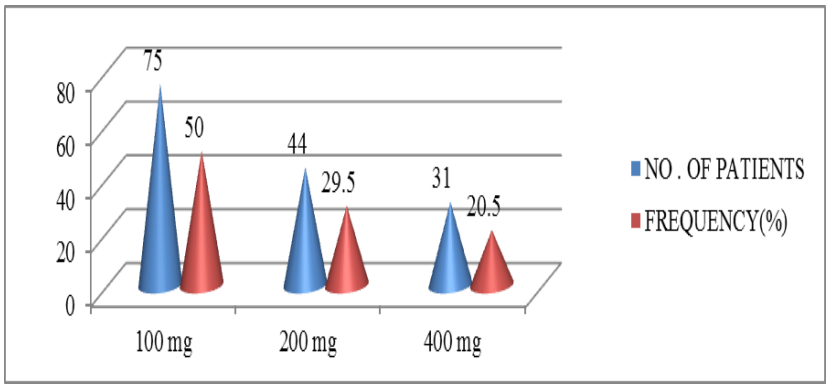
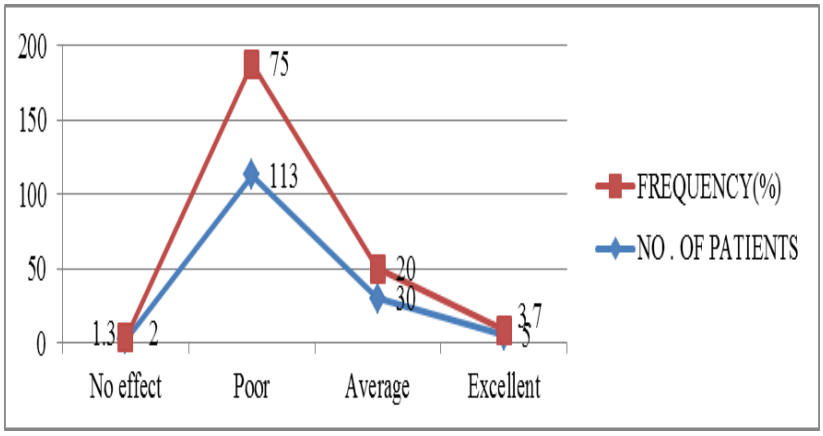


Table 9: Shows the effectiveness of the treatment.

THERAPY EFFECT	NO. OF PATIENTS	FREQUENCY (%)
No effect	2	1.3
Poor	113	75
Average	30	20
Excellent	5	3.7



DISCUSSIONS

Out of 216 patients 150 are male and 66 are female with marital status of 216 (100%) and education level are mostly tertiary of 108 (50%) and nutritional status of average and hygienic conditions of average are taken in study. The reason for using Amiodarone for patients is due to cardiac arrhythmias of 50% and least of ventricular tachycardia of 5.8%. And treatment regimen of patients mainly prescribed was Amiodarone 108. Procainamide for only 6 patients due to complications of Amiodarone. The side effects of Amiodarone are mainly loss of appetite, constipation, nausea & vomiting of 45patients (30%), renal failure of 8 patients (5%), severity of side effects due to Amiodarone are mainly mild which can be overcome without any treatment. As duration of Amiodarone who are in our study are maximum 1-3years of 119patients (69.5%) and dose of Amiodarone is maximum 100-200mg of 119 people 69.5% and treatment regimen with outcomes was poor. The treatment cannot show a better outcomes and the regimen is not effective.

CONCLUSION

Our study conclude that the patients who are suffering with cardiac arrhythmia are mainly using Amiodarone, there is no effect due to the drug so the physicians should monitor and make the treatment effective with different classes of drugs which are effective for cardiac arrhythmias. So as we are clinical pharmacists we should modify the treatment and make the treatment regimen effective and advise the patients about the side effects and complications of drugs prescribed. We should provide information via leaflets or information broachers about the conditions & complications makes the life of a patient better.

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Conflict of interest

Yes.

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