ORIGINAL ARTICLE

EVALUATION OF THE HOSPITAL CARE IN CARDIOVASCULAR DISEASE PATIENTS

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ABSTRACT

Background: The majority of cardiovascular disease patients require life-long treatment and regular monitoring. The objective of the study was to evaluate the hospital care in cardiovascular disease patients in Faisalabad Institute of Cardiology, Faisalabad.

Material & Methods: This cross-sectional study was conducted in the Faisalabad Institute of Cardiology (FIC), Faisalabad, Pakistan from January to June 2016 after approved by ethical committee. A total of 150 patients were selected through convenient sampling technique. Adult admitted cardiac patients of both genders were included. Emergency cases were excluded. Demographic variables were sex, age groups, residence and economic status. Research variables were diagnosis, mode of payment, lab investigation and staff's communication. Study instruments was a pre validated standardized questionnaire. All the variables being categorical were analyzed by frequency and percentages by using SPSS version 21.

Results: Out of 150 patients, 9.3% were <35 years, 26% were from 35-45 years, 30% were 45-55 years, 25.3% were 55-65 years and 9.3% were >65 years of age. Mostly were male 54.7% from rural area 44.7% and 73.3% were having less monthly income. Myocardial Infarctions cases were 28%, Coronary Artery Bypass Grafting (CABG) were 26%, Mitral Valve Regurgitation 26% and Acute Coronary Syndromes (ACS) were 20%. Mostly payment for treatment paid by the government funds 75.3%.

Conclusion: Most of the cardio vascular disease patients were urban males, 45-55 years of age and of lower income group. Majority were suffering from myocardial infarction. Common mode of payment was through government. Communication of hospital staff with the patients was good.

KEY WORDS: Cardiovascular Diseases; Questionnaire; Medicine.

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INTRODUCTION

Cardiovascular diseases (CVD) are considered as one of the major health issue all over the world. In United States forty percent of deaths are caused by cardiovascular diseases. Among heart diseases, Ischemic Heart Disease (IHD) is the most prevalent.

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CVD has also been reported to affect the global economy and management of other diseases in the world. According to center for disease control[1] CVD is a leading cause of death followed by cancer and diabetes. Mortality rate from CVD has increased from 10 percent (at the beginning of 20th century) to 47 percent following industrial revolution. With an unknown aetiology, complete cure for CVD is still far from reality. An alternate approach focusing on managing the disease symptoms and avoiding the risk factors have been practiced.

Nevertheless an effective patient care plan is required to manage cardiovascular disease. This can only be beneficial if all the stakeholder of care team including physician, pharmacist and patient along with other health care staff coordinate to achieve a predefined goal of well managed pathologic condition.[2] On the basis of knowledge based

understanding of the disease progression, risk factors and available treatment choices a physician, being the leader of the team, develops a customized disease management plan based on clinical picture, diagnosis routine and consultation with the clinical pharmacist. However a care plan is effective only if the personals responsible for drug compliance are also included in the treatment plan.[3]

Different professional bodies such as American Heart Association (AHA) and American College of Cardiology (ACC) have published guidelines regarding prevention of heart diseases. Primary highlights of these guidelines include drug of choice with reference to severity of disease, dose regimen and risk factors. Some of the risk factors for CVD include diabetes, high blood pressure, alcohol, tobacco use, unhealthy life styles and physical inactivity.[4] It is a reported fact that if causative factors of cardiovascular systems are managed properly and timely, it reduces the risks of hospitalization and improves life expectancy of the patient.

Real picture of a particular health care system frequently deviates from the proposed standards. Some of these include; irrational prescribing, polypharmacy, dosing errors[5] and non-compliance.[6] These malpractices significantly add to the burden of disease and hampers economic well-being of a community.[7]

Evaluation of the current state of hospital care in a community provides a baseline at health related problems. It also enables the researchers to guestimate an improvement plan for future years. The objective of the study was to evaluate the hospital care in cardiovascular disease patients in Faisalabad Institute of Cardiology, Faisalabad.

MATERIAL AND METHODS

This cross-sectional study was conducted in the Faisalabad Institute of Cardiology (FIC), Faisalabad, Pakistan from January 2016 to June 2016. A total of 150 patients were selected for the evaluation of hospital care using convenient sampling technique. Adult admitted cardiac patients of both genders were included. Emergency cases were excluded. Demographic variables were sex, age groups, residence (urban and rural) and economic status. Age groups had 5 attributes of <35 years, 35-45, 45-55, 55-65 and >65 years. Economic status had 3 attributes of PKR <15000, 15000-35000 and >35000. Research variables were diagnosis, mode of payment, lab investigation (advised and not advised) and staff's communication at the time of discharge (good and bad) with patients. Diagnosis had 4 attributes of myocardial infarction, coronary artery bypass grafting, mitral valve regurgitation and acute coronary syndrome. Mode of payment had 3 attributes by patient, by government and by sponsor.

Ethical approval for the study was obtained from the ethical committee, University of Faisalabad. The purpose of study was explained to every patient. Some information for example names of the patients and income were kept confidential. Interviews were at liberty to leave this study. Study instrument was a pre validated standardized questionnaire. All the variables, being categorical were analyzed by frequency and percentages. The descriptive statistics were calculated by using a SPSS (Statistical Package for Social Sciences) version 21 software package.

RESULTS

Out of 150 patients, 14 (9.3%) were <35 years, 39 (26%) were from 35-45 years, 45 (30%) were 45-55 years, 38 (25.3%) were 55-65 years and 14 (9.3%) were >65 years of age (figure 1).

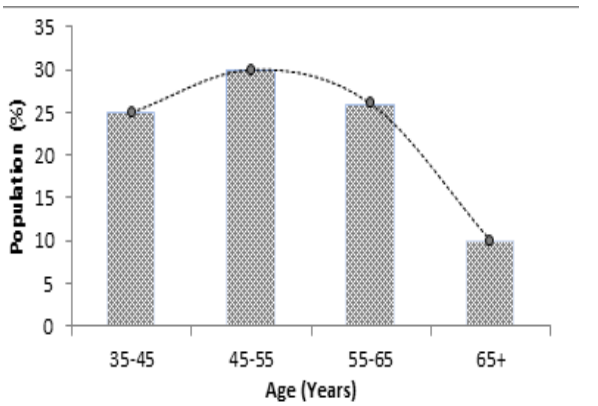

Figure 1: Age wise distribution of the admitted cardiac patients in Faisalabad Institute of Cardiology, Faisalabad.

Out of 150 patients, 82 (54.7%) were males and 68 (45.3 %) were females. Sixty three (55.3%) of the patients were urban and 67 (44.7%) were rural. Myocardial Infarctions (MI) cases were 42 (28%), Coronary Artery Bypass Grafting (CABG), were 39 (26%), Mitral Valve Regurgitation 39 (26%) and Acute Coronary Syndromes (ACS) 30 (20 %). One hundred and ten patients (73.3 %) were having monthly income less than or equal to PKR 15000, 12 (8%) patients had monthly income in the range of PKR 15000-35000 while the remaining 28 (18.7%) had income range more than PKR 35000. The results on payment for treatment shows that 17 (11.3%) were paid by the patients, 113 (75.3%) by the government funds, and only 20 (13.3%) were paid by sponsor. One hundred and thirty two (88%) cases were advised lab investigations while 18 (12%) were not. At discharge stage 68.7% understood their doses and frequency of administration while 31.3 % of patients were not able to repeat this essential information regarding medication use at home (table-1).

Table 1. Evaluation of cardiac cases in Faisalabad Institute of Cardiology (n=150)

S. No	Variables		Frequency	Percent
1	Gender	Male	82	54.7
		Female	68	45.3
2	Age groups in years	<35	14	9.3
		35 - 45	39	26.0
		45 - 55	45	30.0
		55 - 65	38	25.3
		>65	14	9.3
3	Residence	Urban	83	55.3
		Rural	67	44.7
4	Monthly income (PKR)	≤15000	110	73.3
		15000-35000	12	8.0
		>35000	28	18.7
5	Diagnosis	MI	42	28.0
		CABG	39	26.0
		MVR	39	26.0
		ACS	30	20.0
6	Mode of payment by	Patient	17	11.3
		Govt.	113	75.3
		Sponsor	20	13.3
7	Lab investigation	Advised	132	88
		Not advised	18	12
8	Staff's communication at the time of discharge	Good	103	68.7
		Bad	47	31.3

DISCUSSION

Majority of population suffering from cardiac diseases was male (54.7%). These results are in agreement with the previous studies showing male at higher risk to cardiac diseases.

Fifty three percent of the patients were urban and 67 (44.7%) were rural. This may be considered a representation of the population living in these areas. However another explanation to this observation is that population living in the cities is relatively rich and affords/prefers a facilitated treatment as private patients as long waiting time in public hospitals hampers the quality of life.

The financial status of the patients was also included in the study as public sector facility is of choice for low income class as these offer free consultation and treatments. Majority of the participants (73.3 %) were having monthly income less than or equal to 15000 PKR (~150 USD). Only 8% patients had monthly income in the range of 15000-35000 PKR (150-350 USD) while the remaining 18.7 % had income range more than 35000 PKR (>350 USD). The results on payment for treatment shows that 75.3 % were treated from government funds, 13.3 % patients were paid either by charity organizations or employer and only 11.3 % of patients paid all of their medical bills.

Patient being an important stakeholder of the therapeutic plan must be informed about the disease process, contraindications, medication dosage and drug administration routine.[8] For this purpose patient education has always been of prime importance for therapeutic success. The situation become challenging where patient with a long list of prescribed medicines is not communicated for doses, time of administration and monitoring of certain pathophysiologic attributes such as blood pressure, prothrombin time, serum lipid profile. Resonsbility of empowering patients reside on the prescriber and allied health care professionals.

CONCLUSION

Most of the cardio vascular disease patients were urban males, 45-55 years of age and of lower income group. Majority were suffering from myocardial infarction. Common mode of payment was through government. Communication of hospital staff with the patients was good.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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None declared.

AUTHORS' CONTRIBUTION

Conception and Design:	NZ, AR, MF, SA
Data collection, analysis & interpretation:	NZ, AR, AS, MA
Manuscript writing:	NZ, MR, SA, MA